

Lighting Modelling for VEU Program Target Setting

Final Report

Prepared for Department of Environment, Land, Water & Planning (Victoria)

30 May 2019

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IMPORTANT NOTE TO READERS

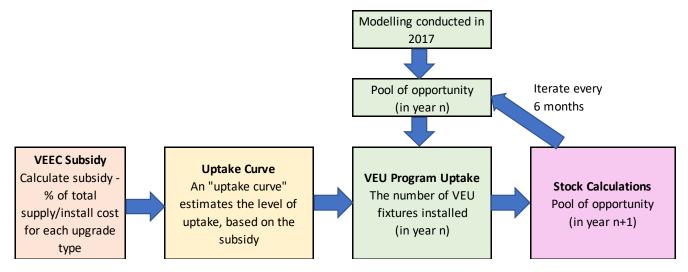
This report draws on results from a desktop model, which contains multiple assumptions and utilises a range of input data from a number of sources. Modelling results should be used for the purpose of determining trends and approximations only. Any conclusions and recommendations included in this report should be viewed in this context, and model results should not be used in any other context without first consulting the author. In addition, a large proportion of this report concerns predictions about the future - extreme care should be taken when attempting to draw conclusions about any future scenarios.

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EXECUTIVE SUMMARY

The Department of Environment, Land, Water and Planning (DELWP) is conducting a review of non-residential lighting in the Victorian Energy Upgrades (VEU) program in order to determine the technical "pool of opportunity". Part of this review includes modelling the potential uptake of energy efficient lighting measures in the non-residential sector, under various scenarios. This report summarises the modelling undertaken for this purpose.

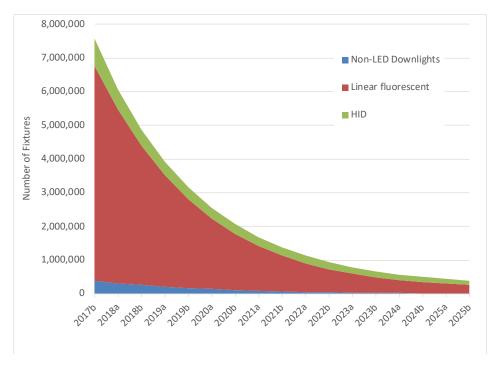
The model developed for this report estimates non-residential lighting stocks in Victoria over the period 2018 to 2025. The market sectors modelled are office, non-office commercial, industrial, non-building and public (street and road lighting). 31 different types of lighting fixtures are modelled and the model contains 25 separate elements (worksheets). The logical flow of the model is shown in the figure below.



The outputs of the model include lighting stocks, uptake of VEU program measures and quantities of VEECs created, as well as energy savings.

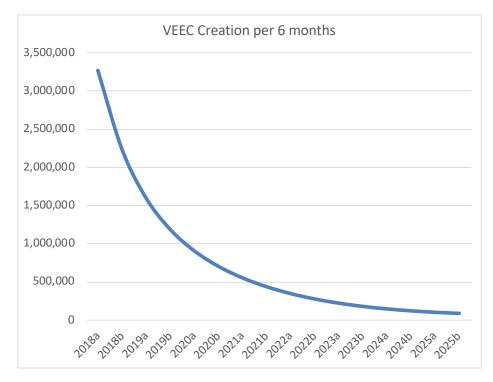
The figure below shows the estimated remaining pool of opportunity – the remaining stocks of non-LED fixtures in Victorian non-residential premises. Note that the time interval is 6-monthly.





The model results for VEEC creation rates are shown in the figure below (again, 6-monthly time interval).

Estimated VEEC creation rates from non-residential lighting (6 monthly)



Total estimated non-residential lighting energy consumption for Victoria is shown in the figure below (annual time interval).

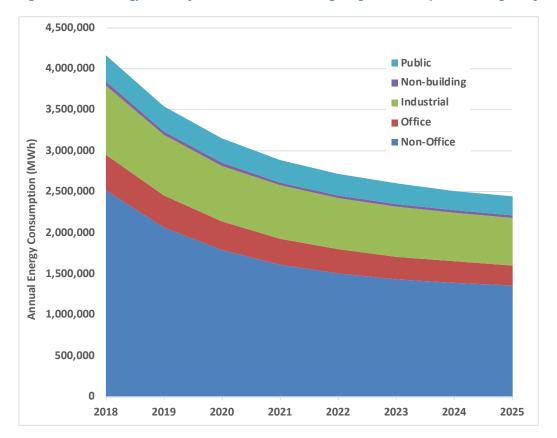


Figure 1: Total energy consumption of non-residential lighting in Victoria (not including new premises)

From the modelling conducted for this study, the following broad conclusions are drawn, **noting that modelling is imperfect as outlined in the Important Note to Readers on page 2**:

- A. For linear fluorescent fixtures, the VEU program drives significant installation of LED linear tubes.
- B. It is not clear at this time the quantity of LED integrated panels that might be installed under the VEU program.
- C. The VEU program drives significant installation of LED fixtures to replace HID fixtures.
- D. Very few halogen downlights remain.
- E. Few upgrades of public lighting have been undertaken under the VEU to date, and it is not clear at this time what the future for this type of upgrade is.
- F. The pool of opportunity is expected to continue to decline markedly, due to the VEU program and the natural market uptake of LED lighting.
- G. The rate of creation of VEECs from non-residential lighting is expected to decline markedly as the pool of opportunity declines.

The energy consumption of non-residential lighting in Victoria is expected to continue to decrease significantly.

GLOSSARY AND ABBREVIATIONS

AC: alternating current

AM: air conditioning multiplier (from VEU Specifications)

AS/NZS: Australia / New Zealand (standards)

BaU: business as usual

CFL: compact fluorescent lamp

CM: control multiplier (from VEU Specifications)

DC: direct current

DELWP: Department of Environment, Land, Water and Planning (Victoria)

Downlight: small, recessed ceiling luminaire.

E3: Equipment Energy Efficiency program, run by Australian and New Zealand Governments

ESC: Essential Services Commission

ELV: extra low voltage GHG: greenhouse gases GWh: giga watt hours

HID: high intensity discharge lighting, such as mercury vapour, metal halide and sodium lighting.

Highbay / lowbay: luminaires commonly used in industrial applications

Integrated LED luminaire: LED luminaire with an integrated LED light source which is essentially not separable from the luminaire itself (as opposed to a luminaire with a removable lamp).

Lamp: light bulb or fluorescent tube.

LCP: lamp circuit power (from VEU Specifications)

LED: light emitting diode

LED: refers to lighting emitting diodes.

Linear: elongated linear fluorescent style luminaires commonly found in offices and commercial premises.

Im/W: lumens per watt, measure of how much light is emitted divided by the electrical power used

Luminaire: light fitting / fixture.

MEPS: minimum energy performance standards

MV: mains voltage MW: mega watt

RIS: regulatory impact statement

SSL: solid state lighting

T12, T8 and T5: linear fluorescent lamps

US DoE: United States Department of Energy

V: volts

VEEC: Victorian Energy Efficiency Certificate created under the Victorian Energy Upgrades program

VEU Specifications: Secretary's Specifications for the Victorian Energy Upgrades program

1. Introduction

The Department of Environment, Land, Water and Planning (DELWP) is conducting a review of non-residential lighting in the Victorian Energy Upgrades program in order to determine the technical "pool of opportunity". Part of this review includes modelling the potential uptake of energy efficient lighting measures in the non-residential sector, under various scenarios. This report summarises the modelling undertaken for this purpose.

The model developed for this report estimates non-residential lighting stocks in Victoria over the period 2018 to 2025. Historical lighting stocks to 2017 are taken from a previous study undertaken by Beletich Associates in 2017 (Beletich 2017).

2. MODELLING

2.1. Background

Lighting is complex. In Australia, there are around *half a billion* lights installed (E3 2016a). There are many different lighting technologies installed in many different types of buildings and sectors, and we are in the middle of an unprecedented period of change in the available types, efficiencies and costs of lighting.

For context, Figure 2 below graphs a credible forecast of future LED stock penetration in the US (all sectors). LED stocks in the US are expected to dominate by around 2023 (light and dark green bands on chart below).

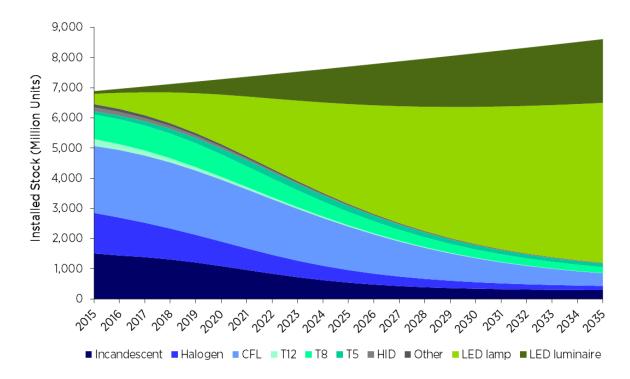


Figure 2 - Forecast installed stock of lighting technologies in the US (all marker sectors) (source: USDoE, 2016)

To estimate the energy savings available from lighting upgrades, we need to examine the lighting *stock* - that is the quantities of various types of lights actually installed in buildings. However, for various reasons very little data exists related to lighting stock. Counting of the stock of lights is

occasionally undertaken by various organisations - for example a modest residential stock count (E3 2016b) was undertaken in 2016, with results being normalised using ABS household information. The challenges involved when counting lighting stock levels include:

- Lighting technologies are changing rapidly, meaning that counts become obsolete very quickly.
- Lighting technologies can be difficult to identify in situ.
- Counting of a representative sample is a comprehensive and expensive exercise.
- Non-residential lighting stocks are considered more difficult to count, due to the wide variations in types of buildings, market sectors and lighting applications involved.

Given these realities, we are forced to rely on desktop modelling for the non-residential lighting sector, which requires a large number of assumptions. These assumptions should be reasonable and supported by references and sound logic.

The resultant model that was constructed for this project is considered to be the best available lighting dataset ever developed for Victoria, although it does contain unavoidable uncertainty as outlined in the Important Note to Readers on page 2.

2.2. Scope

The model estimates non-residential lighting stocks in Victoria over the period 2018 to 2025, with a resolution of 6 months. The market sectors modelled are:

- Office: the office commercial lighting segment services predominantly office-based businesses, and the main product in this sector has traditionally been the linear fluorescent luminaire. There are often different lighting types, e.g. downlights, in service areas such as kitchens, bathrooms and lift lobbies, and downlights have become more widespread in recent years.
- Non-office commercial: non-office commercial lighting services businesses that include retail, education, health, accommodation, hospitality and leisure. The main product in this sector has also traditionally been the linear fluorescent luminaire, but it is supplemented by a wide variety of specialty lighting such as spot lighting and HID highbay fixtures for retail premises. Apart from shopping centres, this sector is largely composed of owner-operators or small leased buildings, requiring specialist lighting solutions.
- Industrial: industrial lighting services industrial sites such as factories. As well as linear fluorescent, it includes highbay and lowbay lighting, depending on ceiling height. Generally, these lights are high output, relatively efficient (compared to filament lamps) and have long lifetimes to minimise maintenance costs. Historically these lights utilised high intensity discharge (HID) light sources, and these are now becoming supplanted with LED.
- **Non-building**: this is outdoor lighting, used for carparks, sporting venues and the like. Fixtures used include highbay, lowbay and linear.
- **Public**: this is street and road lighting and in Victoria is typically HID or LED (noting that linear fluorescent is now rare in Victoria).

Note in this report the primary unit used to quantify lights is a *lighting fixture*, otherwise known as a luminaire or light fitting. Any data expressed as *lamps* were ultimately converted into *lighting fixture* stocks in the model. The fixture types modelled are listed in Table 1.

Table 1: Lighting fixtures modelled

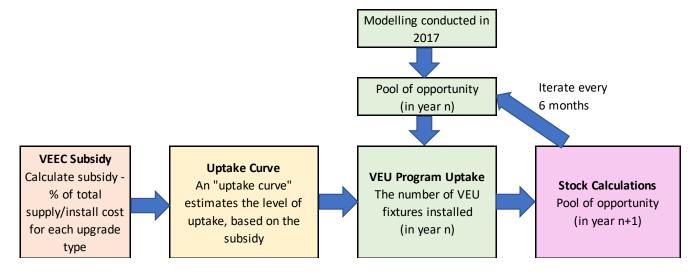
Fixture Type	Description
Downlight CFL	Compact fluorescent downlight fixture
Downlight halogen	Halogen downlight fixture
Downlight LED (BaU)	LED downlight fixture, installed as part of business-as-usual (no VEECS generated)
Downlight LED (VEU)	LED downlight fixture, installed as part of the VEU program
Linear T8	Linear fluorescent fixture, T8 lamps
Linear T5	Linear fluorescent fixture, T5 lamps
Linear LED tube (BaU)	Linear fixture, LED tubular lamps, installed as part of business-as-usual (no VEECS generated)
Linear LED tube (VEU)	Linear fixture, LED tubular lamps, installed as part of the VEU program
Linear LED panel (BaU)	Linear integrated LED panel fixture, installed as part of business-as-usual (no VEECS generated)
Linear LED panel (VEU)	Linear integrated LED panel fixture, installed as part of the VEU program
Bay/shop HID	Highbay, lowbay or shop light HID fixture
Bay/shop LED (BaU)	Highbay, lowbay or shop light LED fixture (to replace HID), installed as part of business-as-usual (no VEECS generated)
Bay/shop LED (VEU)	Highbay, lowbay or shop light LED fixture (to replace HID), installed as part of the VEU program
Public MV 80W	Roadway HID fixture, mercury vapour
Public LED equ MV 80W (BaU)	Roadway LED fixture (to replace HID), installed as part of business-as-usual (no VEECS generated)
Public LED equ MV 80W (VEU)	Roadway LED fixture (to replace HID), installed as part of the VEU program
Public MV 125W	Roadway HID fixture, mercury vapour
Public LED equ MV 125W (BaU)	Roadway LED fixture (to replace HID), installed as part of business-as-usual (no VEECS generated)
Public LED equ MV 125W (VEU)	Roadway LED fixture (to replace HID), installed as part of the VEU program
Public HPS 100W	Roadway HID fixture, high pressure sodium
Public LED equ HPS 100W (BaU)	Roadway LED fixture (to replace HID), installed as part of business-as-usual (no VEECS generated)
Public LED equ HPS 100W (VEU)	Roadway LED fixture (to replace HID), installed as part of the VEU program
Public HPS 150W	Roadway HID fixture, high pressure sodium
Public LED equ HPS 150W (BaU)	Roadway LED fixture (to replace HID), installed as part of business-as-usual (no VEECS generated)
Public LED equ HPS 150W (VEU)	Roadway LED fixture (to replace HID), installed as part of the VEU program

Fixture Type	Description
Public HPS 250W	Roadway HID fixture, high pressure sodium
Public LED equ HPS 250W (BaU)	Roadway LED fixture (to replace HID), installed as part of business-as-usual (no VEECS generated)
Public LED equ HPS 250W (VEU)	Roadway LED fixture (to replace HID), installed as part of the VEU program
Public HPS 400W	Roadway HID fixture, high pressure sodium
Public LED equ HPS 400W (BaU)	Roadway LED fixture (to replace HID), installed as part of business-as-usual (no VEECS generated)
Public LED equ HPS 400W (VEU)	Roadway LED fixture (to replace HID), installed as part of the VEU program

2.3. Description of Model

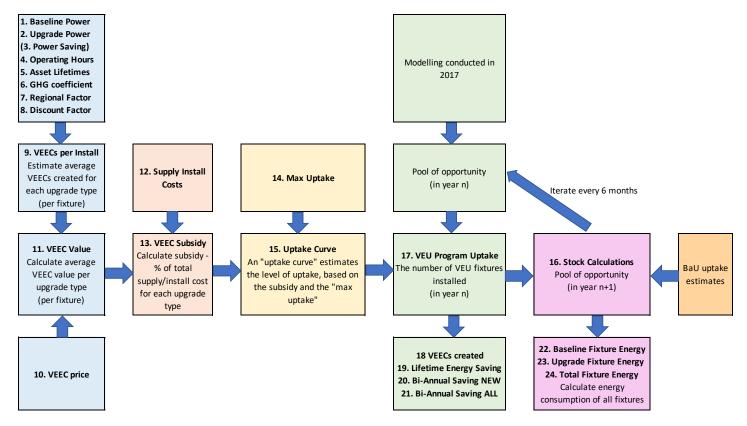
The logical flow of the model is shown in Figure 3, which is a simplified flow chart of the model.

Figure 3: Simplified flow chart of model



The flow chart shown in Figure 4 is an expanded version of the chart shown in Figure 3. It demonstrates how each of the 25 elements of the model relate to each other. Each element is also explained in more detail below, and the data sheet for each element is included in Annex A.

Figure 4: Detailed flow chart of model



Each element of the model is explained below, along with any assumptions and data sources utilised.

1. Baseline Power

This is the average power per fixture (LCP x CM x AM) for the baseline fixtures in each sector. It includes control and A/C multipliers (CM and AM). Values for Baseline Power were extracted from the raw VEU program registry data which is hosted by the Essential Services Commission (ESC) 1 .

2. Upgrade Power

This is the average power of the upgraded fixtures (LCP x CM x AM) in each sector. It includes control and A/C multipliers (CM and AM). Values for Upgrade Power were extracted from raw VEU program registry data provided by DELWP.

It was assumed that the power of installed LED fixtures would decrease at a rate of 1.5% every 6 months, in line with a US Department of Energy Study (US DoE 2016) which shows the expected improvements in luminous efficacy of LEDs over time.

3. Power Saving

This is the power saving per upgraded fixture; the difference between the baseline and upgrade power values (includes control and A/C multipliers).

¹ This dataset is compiled by ESC based on products registered and installed under the VEU program

4. Operating Hours

These are the annual operating hours as provided by the VEU Specifications.

5. Asset Lifetimes

These are the asset lifetime (in years) as provided by the VEU Specification.

6. GHG coefficient

The GHG coefficient as provided by the VEU Specification.

7. Regional Factor

This is a weighted average regional factor. The VEU Specification provides a separate regional factor for metropolitan and regional areas. We assume that 75% of VEU upgrades occur in metropolitan areas and 25% in regional areas, in from this a weighted average is calculated.

8. Discount Factor

This is a discount factor which can be arbitrarily applied to energy savings. It was set to 1.0 for all fixtures for the purposes of this report, but could be altered by DELWP in future if policy decisions are made to discount incentives for particular upgrades.

9. VEECs per Install

This is the calculated average number of VEECs generated per fixture type installed under the VEU program. It is calculated from items #3 to #8 above.

10. VEEC Price

This is the price assigned to VEECs. This was set to \$16.50 for all years (2018 to 2025) based on advice from DELWP for the purposes of presenting results in this report (i.e. this is just a reference scenario). Note that the VEEC price can be altered by DELWP to allow for interaction between this model and others and feed into the target setting process.

11. VEEC Value

This is the average, gross VEEC value per fixture installed. It is the average, gross value of VEECs generated from each fixture install type, calculated from items #9 and #10 above.

12. Supply Install Costs

These are average, combined (supply and installation) costs of fixtures, based on discussions held with approved providers (APs) operating in the VEU program. It was assumed that the cost of LED supply and install would decrease at a rate of 2% every 6 months, in line with a US Department of Energy Study (US DoE, 2016).

13. VEEC Subsidy

This is the VEEC subsidy as percentage of supply/install cost. It represents the gross VEEC subsidy as a percentage of the supply+install cost and is calculated as #11 divided by #12.

14. Max Uptake

This is the maximum possible uptake of fixture installations, as a percentage of the previous 6-month's stock. For example, if there are 100,000 of a certain type of fixture remaining in the Victorian stock and the Max Uptake is set at 25%, then under perfect conditions (high VEEC price leading to "giveaways" of fixtures) then 25,000 fixtures will be installed within 6 months. The Max Uptake figure is set by calibrating the model using actual uptake rates from 2017.

Important note: For some activities, for example installation of LED panels, there has been very little activity to date, thus the Max Uptake value for this activity is set very low (in order to be conservative). If this activity becomes more popular in future (e.g. as APs gear up to undertake it) then the Max Uptake value can be increased based on some real-world data.

15. Uptake Curve

A curve was developed by Sustainability Victoria, to estimate the uptake of VEU activities, based on the level of subsidy available from the VEU program. If a 100% subsidy was available, then the resultant uptake would be "Max Uptake" (#14). The uptake curve developed by Sustainability Victoria is shown in Figure 5.

100% Jptake rate, as % of maximum possible uptake 90% 80% 70% 60% 50% 40% 30% 20% 10% 0% 10% 20% 30% 80% 40% 50% 60% 70% 90% 100% **Subsidy Available**

Figure 5: Uptake curve

The result of element #15 is the percentage of remaining stock which will be converted to LED fixtures under the VEU program in a 6 month period.

16. Stock Calculations

This area of the model begins with 2017 stock estimates from Beletich 2017 and applies the predicted uptake rates discussed in #17 in order to determine how the stock (and pool of opportunity) is changing every 6 months.

#16 also includes estimated of business-as-usual (BaU) uptake of LED fixtures (which do not generate VEECs). It is assumed that the stock of non-LED fixtures is naturally transitioning to LED at a rate of 5% p.a. This is in addition to the LED transition occurring due to the VEU program and mimics the data seen in US DoE 2016.

17. VEU Program Uptake

This is the VEU program uptake rate for each type of fixture and is simply extracted from #16.

18. VEECs Created

This the number of VEECs created, calculated from #17 and #9.

19. Lifetime Energy Saving

This is the average lifetime energy saving per fixture, in MWh, calculated from #18.

20. Bi-Annual Saving NEW

This is the 6-monthly energy savings (MWh) for VEU fixtures installed. It is only for the fixtures installed in any particular year (i.e. it does not include the energy savings from fixtures installed in previous years).

21A. Bi-Annual Saving ALL 18-25

These are 6-monthly energy savings (MWh) for all fixtures installed from 2018 onwards. It includes energy savings from fixtures installed in previous years (2018 - 2025).

21B. Bi-Annual Saving ALL 21-25

This is the 6-monthly energy savings (MWh) for all fixtures installed from 2021 onwards. It is the same as 21A but only for fixtures installed from 2021 - 2025.

22. Baseline Fixture Energy

This is the baseline fixture energy (MWh per 6 months) - the energy used by all baseline fixtures.

23. Upgrade Fixture Energy

This is the upgrade fixture energy (MWh per 6 months) - the energy used by all upgrade fixtures.

24. Total Fixture Energy

This is the total fixture energy (MWh per 6 months) - the energy used by all fixtures (sum of #22 and #23).

25. SubModel Template

These are values for VEEC prices and GHG coefficients, over the period 2018 to 2025, as supplied by DELWP. The VEEC price was held at \$16.50 for all years and the GHG coefficient at 1.095 for all years (for the purpose of providing a reference scenario).

3. KEY RESULTS AND CONCLUSIONS

The resultant fixture stocks are graphed in Figure 6 to Figure 10. Note that the totals do not increase over time – only existing premises are eligible under the VEU program and thus new premises are not modelled (and these are likely to be installed only with LED lights).

Figure 6: Fixture stocks in non-office commercial buildings

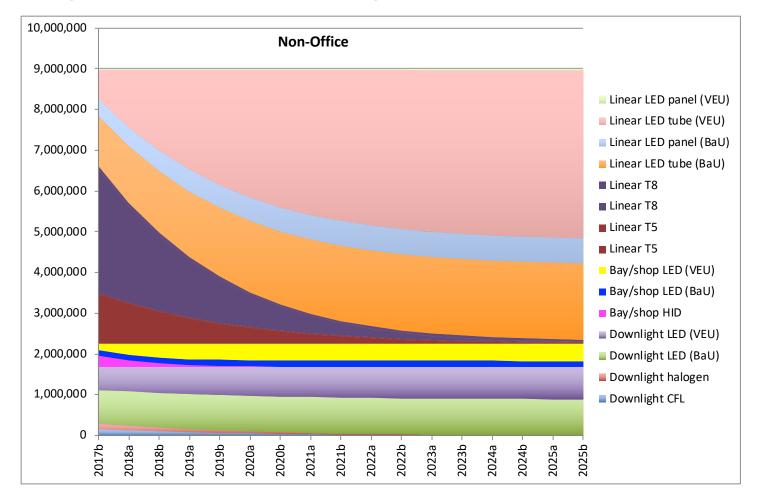


Figure 7: Fixture stocks in office buildings

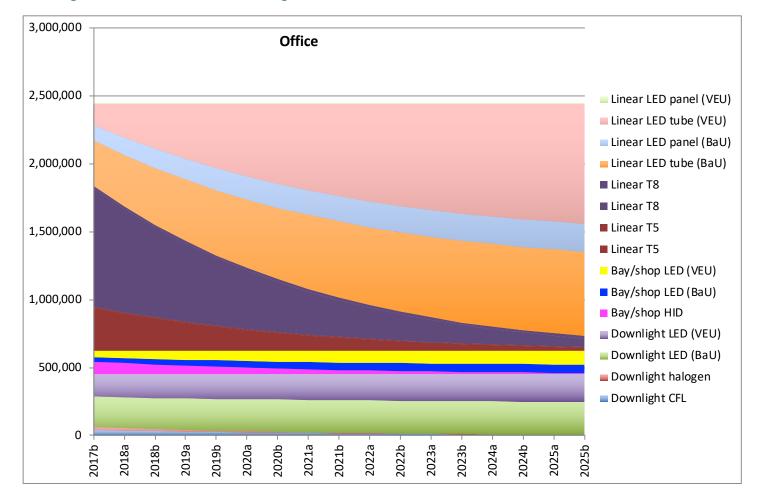


Figure 8: Fixture stocks in industrial buildings

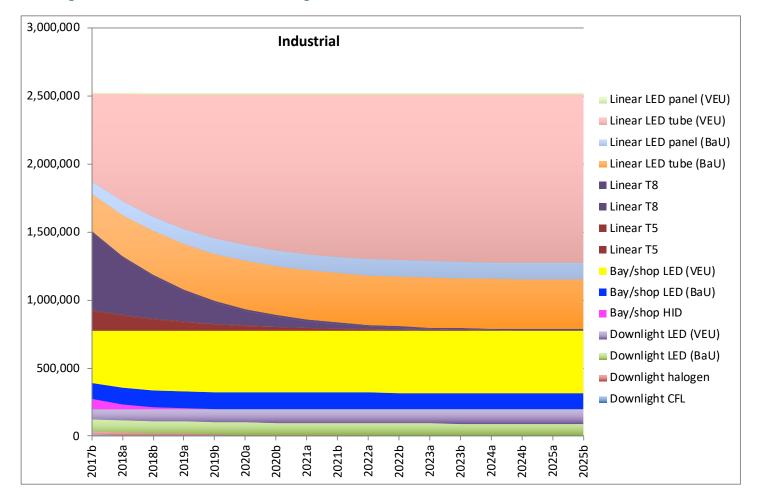
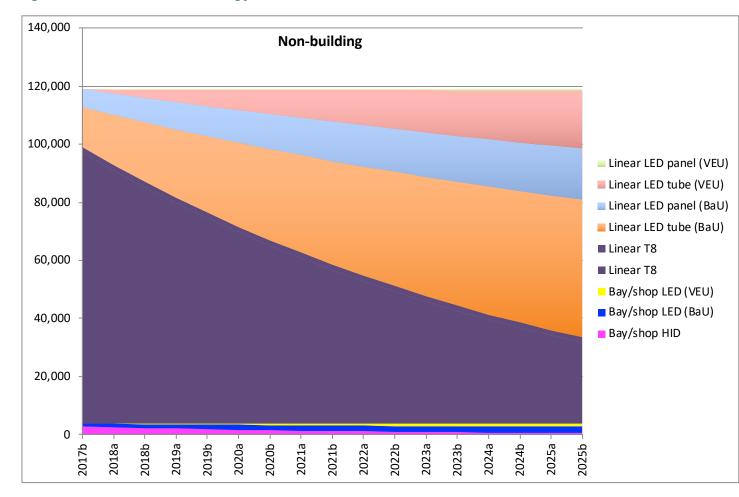


Figure 9: Fixture stocks in non-building premises





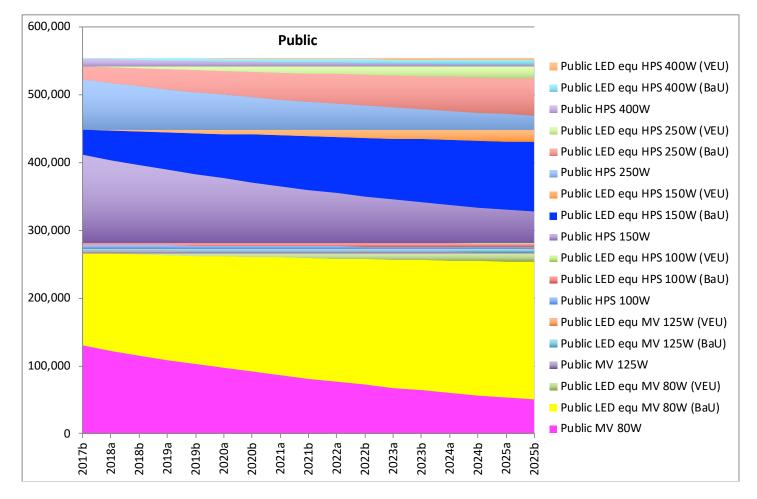
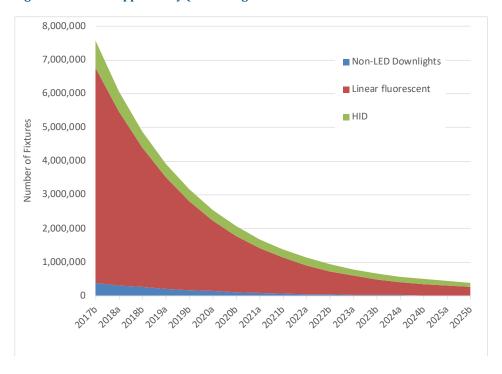


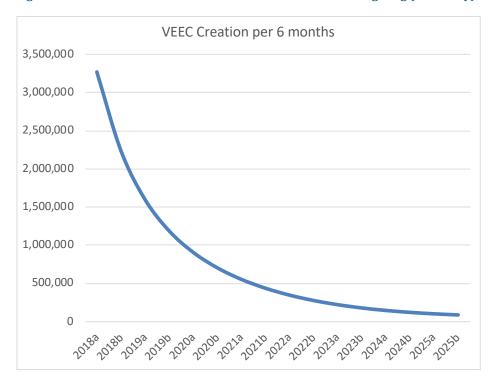
Figure 11 shows the estimated pool of opportunity – the remaining stocks of non-LED fixtures in Victorian non-residential premises (note time scale is 6-monthly).

Figure 11: Pool of opportunity (remaining stocks of non-LED fixtures in Victorian non-residential premises)



The resulting modelled results for VEEC creation are shown in Figure 12.

Figure 12: Estimated VEEC creation rates from non-residential lighting (6 monthly)



Total non-residential lighting energy consumption for Victoria is shown in Figure 13 (annual time scale).

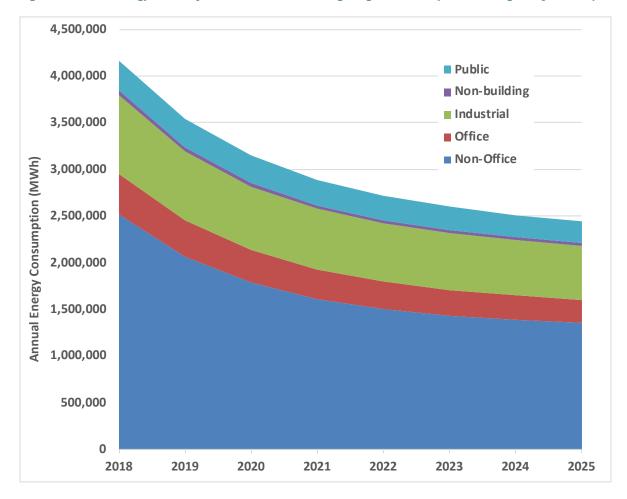


Figure 13: Total energy consumption of non-residential lighting in Victoria (not including new premises)

From the modelling conducted for this study, the following broad conclusions are drawn, **noting that** modelling is imperfect as outlined in the Important Note to Readers on page 2:

- A. For linear fluorescent fixtures, the VEU program drives significant installation of LED linear tubes.
- B. It is not clear at this time the quantity of LED integrated panels that might be installed under the VEU program.
- C. The VEU program drives significant installation of LED fixtures to replace HID fixtures.
- D. Very few halogen downlights remain.
- E. Few upgrades of public lighting have been undertaken under the VEU to date, and it is not clear at this time what the future for this type of upgrade is.
- F. The pool of opportunity is expected to continue to decline markedly, due to the VEU program and the natural market uptake of LED lighting.
- G. The rate of creation of VEECs from non-residential lighting is expected to decline markedly as the pool of opportunity declines.
- H. The energy consumption of non-residential lighting in Victoria is expected to continue to decrease significantly.

4. REFERENCES

Beletich 2017, Non-Residential Sector Lighting Modelling, Final Report, Prepared for Department of Environment, Land, Water & Planning (Victoria), 4 December 2017.

E3 2016a, Consultation Regulation Impact Statement - Lighting, Regulatory reform opportunities and improving energy efficiency outcomes, Energy Efficient Equipment Committee, November 2016.

E3 2016b, 2016 Residential Lighting Report, Results of a lighting audit of 180 Australian homes, Energy Efficient Equipment Committee, June 2016.

US DoE 2016, Energy Savings Forecast of Solid-State Lighting in General Illumination Applications, Prepared for the U.S. Department of Energy Solid-State Lighting Program, September 2016, Prepared by Navigant.

ANNEX A - DATA SHEETS FROM EACH ELEMENT OF MODEL

25. VEET Sub-Model Input/Output Template V3

This worksheet to be included as a worksheet on each of the 3 sub-models

Sub-Model Name: Non-residential lighting

1) Inputs used by sub-model

Transmitted from Andrew's master model to each sub-model

	2018	2019	2020	2021	2022	2023	2024	2025
VEEC price	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
tCO2e/MWh Electricity	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
tCO2e/GJ Natural Gas	0.05523	0.05523	0.05523	0.05523	0.05523	0.05523	0.05523	0.05523

2) Results from sub-model

Live results which will be transmitted from each sub-model back to Andrew's master model

	2018	2019	2020	2021	2022	2023	2024	2025
Estimated certificate creation (millions p.a.)	5,500,000	2,776,425	1,599,332	977,078	609,680	386,652	253,087	175,195

24. Total fixture energy (MWh per 6 months)

ID	Part	Sector	Fixture	Name	2018a	2018b	2019a	2019b	2020a	2020b	2021a	2021b	2022a	2022b	2023a	2023b	2024a	2024b	2025a	2025b
1	34	Non-Office	Downlight CFL	1 - part 34 - Non-Office - Downlight CFL	9,141	7,445	6,017	4,824	3,834	3,019	2,354	1,816	1,386	1,045	778	571	413	294	206	142
2	34	Non-Office	Downlight halogen	2 - part 34 - Non-Office - Downlight halogen	8,216	6,647	5,335	4,245	3,347	2,612	2,018	1,541	1,163	867	637	461	329	230	159	107
3	34	Non-Office		3 - part 34 - Non-Office - Downlight LED (BaU)	31,854	32,252	32,568	32,814	33,003	33,144	33,246	33,317	33,361	33,385	33,392	33,386	33,370	33,346	33,316	33,281
3a	34	Non-Office	Downlight LED (VEU)	3a - part 34 - Non-Office - Downlight LED (VEU)	14,901	15,480	15,923	16,250	16,478	16,620	16,692	16,703	16,667	16,590	16,481	16,348	16,195	16,027	15,849	15,663
4	34	Non-Office		4 - part 34 - Non-Office - Bay/shop HID	80,708 33,908	44,549 35.870	24,590	13,573 37,475	7,492 37.747	4,135 37.864	2,283 37.894	1,260 37.875	695 37.827	384 37.762	212 37.685	117 37,600	65 37,510	36 37.413	37,312	37.205
5	34	Non-Office	Bay/shop LED (BaU)	5 - part 34 - Non-Office - Bay/shop LED (BaU)	33,908	35,870 43 318	36,924 46,945	37,475 48 587	37,747 49 154	37,864 49 142	37,894	37,875 48.333	37,827 47 763	37,762 47 153	37,685 46,525	37,600	37,510 45,263	37,413 44 639	37,312 44,023	37,205 43,416
5d	34	Non-Office	Linear TS	6 - part 34 - Non-Office - Linear T5	213.203	170.245	134,945	106.136	82,793	64.024	49,054	37.217	27,943	20.747	15.221	11.025	7.877	5,546	3.842	2.617
7	34	Non-Office	Linear TS	7 - part 34 - Non-Office - Linear T5	5.382	5.352	5.320	5.287	5,253	5.216	5.179	5.139	5.098	5.055	5.010	4,965	4,921	4,877	4.834	4,791
8	34	Non-Office	Linear T8	8 - part 34 - Non-Office - Linear T8	562,016	435,543	333,686	252,525	188,596	138,861	100,685	71,804	50,297	34,551	23,235	15,265	9,775	6,083	3,666	2,131
9	34	Non-Office	Linear T8	9 - part 34 - Non-Office - Linear T8	14,549	14,452	14,349	14,242	14,130	14,014	13,892	13,768	13,645	13,524	13,404	13,284	13,166	13,049	12,933	12,818
10	34	Non-Office	Linear LED tube (BaU)	10 - part 34 - Non-Office - Linear LED tube (BaU)	163,252	177,868	189,232	197,964	204,584	209,526	213,150	215,749	217,561	218,777	219,546	219,984	220,182	220,205	220,104	219,915
11	34	Non-Office	Linear LED panel (BaU)	11 - part 34 - Non-Office - Linear LED panel (BaU)	54,412	59,277	63,056	65,957	68,151	69,784	70,976	71,824	72,407	72,790	73,021	73,139	73,174	73,149	73,079	72,976
11a	34	Non-Office	Linear LED tube (VEU)	11a - part 34 - Non-Office - Linear LED tube (VEU) 11b - part 34 - Non-Office - Linear LED panel (VEU)	98,002	135,083	164,169 1.697	186,580	203,469	215,836	224,544	230,325	233,797	235,475	235,781	235,057	233,577	231,554	229,154	226,501
110	34	Office	Downlight CFL	12 - part 34 - Non-Office - Linear LED panel (VEO)	1,582	1,496	1,330	1,760	1,827	924	815	717	2,112	2,184	482	420	2,401	2,473	2,544	2,615
13	34	Office	Downlight halogen	13 - part 34 - Office - Downlight Crit	1,001	1,496	1,330	1,100 418	350	291	240	196	150	127	100	420	58	212	2/2	200
14	34	Office	Downlight LED (BaU)	14 - part 34 - Office - Downlight LED (BaU)	5.133	5.187	5.233	5.272	5.306	5.335	5,359	5.380	5.396	5.410	5.421	5,429	5.435	5,440	5.443	5.444
14a	34	Office	Downlight LED (VEU)	14a - part 34 - Office - Downlight LED (VEU)	2,585	2,605	2,619	2,627	2,630	2,628	2,623	2,614	2,602	2,588	2,571	2,552	2,531	2,509	2,485	2,460
15	34	Office	Bay/shop HID	15 - part 34 - Office - Bay/shop HID	15,810	13,657	11,760	10,093	8,633	7,357	6,245	5,279	4,443	3,722	3,102	2,572	2,121	1,739	1,416	1,146
16	34	Office	Bay/shop LED (BaU)	16 - part 34 - Office - Bay/shop LED (BaU)	4,010	4,400	4,737	5,025	5,272	5,482	5,659	5,809	5,934	6,038	6,124	6,195	6,252	6,297	6,333	6,361
16a	34	Office	Bay/shop LED (VEU)	16a - part 34 - Office - Bay/shop LED (VEU)	2,642	2,936	3,186	3,395	3,569	3,712	3,828	3,919	3,990	4,041	4,076	4,097	4,106	4,105	4,094	4,076
17	34	Office	Linear T5	17 - part 34 - Office - Linear T5	36,259	31,501	27,301	23,600	20,345	17,489	14,989	12,805	10,903	9,251	7,820	6,585	5,522	4,611	3,832	3,170
18	34	Office		18 - part 34 - Office - Linear TS	848	846	844	842	839	837	835	832	830	827	824	821	818 15.941	815	811	808
19 20	34	Office		19 - part 34 - Office - Linear T8 20 - part 34 - Office - Linear T8	107,773 2.514	93,771 2,508	81,352 2,501	70,359 2,493	60,651 2,486	52,098 2,478	44,584 2,469	38,001 2,461	32,252 2,452	27,248 2,442	22,910 2,433	19,163 2.422	15,941 2.412	13,184 2,401	10,836 2,389	8,847 2,377
20	34	Office		21 - part 34 - Office - Linear 18 21 - part 34 - Office - Linear LED tube (BaU)	26,787	2,508	31,859	2,493 33,895	2,486 35,649	37,153	38,438	39,530	40,454	41,231	41,880	42,418	42,860	43,220	43,509	43,737
22	34	Office		22 - part 34 - Office - Linear LED tube (BaU)	8,929	9,835	10,620	11,298	11,882	12,383	12,811	13,175	13,482	13.740	13,956	14,134	14,280	14,398	14,493	14,567
22a	34	Office	Linear LED tube (VEU)	22a - part 34 - Office - Linear LED tube (VEU)	10.361	13.626	16,444	18,865	20.932	22,684	24,155	25,377	26,380	27.187	27.824	28,309	28,663	28,902	29.040	29.093
22b	34	Office	Linear LED panel (VEU)	22b - part 34 - Office - Linear LED panel (VEU)	106	113	121	128	137	145	154	162	171	180	189	198	207	216	226	235
23	34	Industrial		23 - part 34 - Industrial - Downlight CFL	742	560	416	305	220	156	108	74	49	31	20	12	7	3	2	1
24	34	Industrial		24 - part 34 - Industrial - Downlight halogen	1,424	1,124	879	681	521	395	295	218	159	114	80	56	38	25	17	11
25	34	Industrial	Downlight LED (BaU)	25 - part 34 - Industrial - Downlight LED (BaU)	3,254	3,305	3,343	3,371	3,392	3,407	3,417	3,423	3,426	3,427	3,426	3,425	3,422	3,419	3,415	3,411
25a	34	Industrial	Downlight LED (VEU)	25a - part 34 - Industrial - Downlight LED (VEU)	1,998	2,091	2,160	2,207	2,237	2,254	2,259	2,255	2,244	2,228	2,208	2,186	2,161	2,135	2,109	2,081
26 27	34 34	Industrial Industrial		26 - part 34 - Industrial - Bay/shop HID 27 - part 34 - Industrial - Bay/shop LED (BaU)	36,065 63,047	16,318 63,779	7,383 64,006	3,341 63,999	1,512 63,880	684 63,705	309 63,497	140 63,269	63 63,023	62,761	62,485	62,193	61,886	61,562	61,220	60,861
27 27a	34	Industrial	Bay/shop LED (VELI)	27 - part 34 - Industrial - Bay/shop LED (bab)	106 516	109 378	109 789	109 122	107 989	106 663	105 264	103 848	107 437	101 044	99 671	98 371	96 996	95 694	94 417	93 163
28	34	Industrial	Linear T5	28 - part 34 - Industrial - Linear T5	25,057	19,191	14,566	10,949	8,146	5,995	4,360	3,131	2,218	1,548	1,064	718	476	309	196	121
29	34	Industrial		29 - part 34 - Industrial - Linear T5	658	655	651	647	643	638	634	629	624	618	613	607	602	597	591	586
30	34	Industrial	Linear T8	30 - part 34 - Industrial - Linear T8	99,752	72,764	52,275	36,944	25,649	17,468	11,651	7,596	4,831	2,989	1,794	1,041	581	311	158	75
31	34	Industrial		31 - part 34 - Industrial - Linear T8	2,734	2,716	2,696	2,676	2,655	2,633	2,610	2,587	2,564	2,541	2,519	2,496	2,474	2,452	2,430	2,409
32	34	Industrial		32 - part 34 - Industrial - Linear LED tube (BaU)	35,434	37,764	39,468	40,692	41,555	42,148	42,542	42,794	42,944	43,022	43,051	43,047	43,020	42,979	42,927	42,869
33	34	Industrial	Linear LED panel (BaU)	33 - part 34 - Industrial - Linear LED panel (BaU)	11,810	12,585	13,151	13,557	13,842	14,037	14,165	14,246	14,291	14,313	14,318	14,311	14,296	14,276	14,251	14,224
33a	34	Industrial	Linear LED tube (VEU)	33a - part 34 - Industrial - Linear LED tube (VEU) 33b - part 34 - Industrial - Linear LED panel (VEU)	54,195	61,204	66,241	69,724	71,999	73,349	74,003	74,142 815	73,907	73,408	72,727	71,925	71,046	70,121	69,173	68,215
330	35	Non-building	Bay/shop HID	34 - part 35 - Non-building - Bay/shop HID	2,398	2,171	1,966	1,780	1,612	1,460	1,322	1,197	1,084	981	889	843	729	660	597	541
35	35	Non-building	Bay/shop LED (BaU)	35 - part 35 - Non-building - Bay/shop LED (BaU)	553	612	665	713	756	795	830	861	889	914	936	956	973	989	1,002	1,014
35a	35	Non-building	Bay/shop LED (VEU)	35a - part 35 - Non-building - Bay/shop LED (VEU)	29	55	78	98	116	131	145	156	167	175	183	190	195	200	204	208
36	35	Non-building	Linear T8	36 - part 35 - Non-building - Linear T8	18,397	17,175	16,022	14,934	13,907	12,939	12,027	11,167	10,357	9,595	8,878	8,204	7,570	6,976	6,419	5,897
37	35	Non-building	Linear T8	37 - part 35 - Non-building - Linear T8	400	398	395	393	390	388	385	382	379	376	373	369	366	363	360	356
38	35	Non-building	Linear LED tube (BaU)	38 - part 35 - Non-building - Linear LED tube (BaU)	1,822	2,164	2,484	2,781	3,058	3,315	3,554	3,775	3,980	4,169	4,344	4,504	4,652	4,788	4,912	5,026
39	35	Non-building	Linear LED panel (BaU)	39 - part 35 - Non-building - Linear LED panel (BaU)	783	897	1,003	1,102	1,194	1,279	1,359	1,432	1,500	1,562	1,620	1,673	1,721	1,765	1,806	1,843
39a	35	Non-building	Linear LED tube (VEU)	39a - part 35 - Non-building - Linear LED tube (VEU)	92	179	261	340	414	484	550	613	672	727	779	828	873	916	955	991
39b 40	35 27	Non-building Public	Public MV 80W	39b - part 35 - Non-building - Linear LED panel (VEU) 40 - part 27 - Public - Public MV 80W	26.407	24.910	23.495	22,159	20.896	19.702	18.575	17.509	16.502	15,551	14.652	13.802	12,999	12,241	11,524	10.847
40	27	Public		41 - part 27 - Public - Public I FD equ MV 80W (Ball)	15,459	16,102	16.706	17.275	20,896 17.809	19,702	18,783	17,509	19,642	20.032	20.398	20,741	21.063	21,364	21,646	21,909
41a	27	Public	Public LED equ MV 80W (VEU)	41a - part 27 - Public - Public LED equ MV 80W (VEU)	45	87	127	164	199	232	263	293	320	346	371	394	415	436	455	473
42	27	Public	Public MV 125W	42 - part 27 - Public - Public MV 125W	990	934	880	829	781	735	693	652	614	577	543	511	480	451	424	398
43	27	Public	Public LED equ MV 125W (BaU)	43 - part 27 - Public - Public LED equ MV 125W (BaU)	458	483	505	527	547	566	584	600	616	631	644	657	669	680	691	701
43a	27	Public	Public LED equ MV 125W (VEU)	43a - part 27 - Public - Public LED equ MV 125W (VEU	2	4	6	8	10	12	13	15	16	17	19	20	21	22	23	24
44	27	Public	Public HPS 100W	44 - part 27 - Public - Public HPS 100W	1,591	1,495	1,405	1,321	1,240	1,165	1,093	1,025		901	845	791	740	693	647	605
45	27	Public		45 - part 27 - Public - Public LED equ HPS 100W (BaU)	406	445	482	517	549	579	608	634	659	683	704	725	743	761	777	793
45a	27	Public	Public LED equ HPS 100W (VEU)	45a - part 27 - Public - Public LED equ HPS 100W (VEU	47.246	6	8	20.45	13	15	18	20	21	23	25	26	28	29	31	32
46 47	27 27	Public Public		46 - part 27 - Public - Public HPS 150W 47 - part 27 - Public - Public LED equ HPS 150W (BaU)	47,246 8.342	44,396 9,514	41,704 10,613	39,160 11,643	36,757 12,609	34,487 13.513	32,344 14,360	30,319 15,151	28,408 15,892	26,603 16.583	24,900 17,228	23,292 17.830	21,775 18.390	20,344 18,912	18,994 19,397	17,722 19,848
47 47a	27	Public	Public LED equ HPS 150W (BaU)	47 - part 27 - Public - Public LED equ HPS 150W (BaU)	8,342	9,514	319	11,643	12,609	15,513	14,350	745	15,892	16,583	948	1,830	18,390	18,912	19,397	19,848
48	27	Public	Tubile EED cqu'ii 3 230 V (VEO)	48 - part 27 - Public - Public HPS 250W	42,644	39,722	36,967	34,373	31,930	29,630	27,467	25,433	23,522	21,727	20,043	18,464	16,985	15,601	14,306	13,097
49	27	Public		49 - part 27 - Public - Public LED equ HPS 250W (BaU)	6,998	8,055	9,038	9,951	10,797	11,582	12,307	12,977	13,595	14,164	14,687	15,167	15,606	16,006	16,371	16,702
49a	27	Public	Public LED equ HPS 250W (VEU)	49a - part 27 - Public - Public LED equ HPS 250W (VEU	184	359	525	681	829	968	1,099	1,222	1,338	1,446	1,547	1,642	1,730	1,811	1,887	1,957
50	27	Public	Public HPS 400W	50 - part 27 - Public - Public HPS 400W	10,858	10,037	9,267	8,544	7,866	7,231	6,636	6,081	5,562	5,077	4,626	4,207	3,817	3,456	3,130	2,834
51	27	Public	Public LED equ HPS 400W (BaU)	51 - part 27 - Public - Public LED equ HPS 400W (BaU)	1,096	1,366	1,615	1,844	2,055	2,249	2,426	2,589	2,737	2,871	2,993	3,104	3,204	3,293	3,373	3,445
51a	27	Public	Public LED equ HPS 400W (VEU)	51a - part 27 - Public - Public LED equ HPS 400W (VEU	65	126	183	237	287	335	379	420	458	493	526	556	583	608	629	647

23. Upgrade fixture stock (all upgrades from start of scheme)

ID	Part	Sector	Fixture	2018a	2018b	2019a	2019b	2020a	2020b	2021a	2021b	2022a	2022b	2023a	2023b	2024a	2024b	2025a	2025b
3a	34	Non-Office	Downlight LED (VEU)	604,992	637,913	666,030	689,901	710,042	726,929	740,999	752,654	762,255	770,128	776,563	781,818	786,115	789,650	792,586	795,061
5a	34	Non-Office	Bay/shop LED (VEU)	283,340	345,778	380,357	399,564	410,289	416,337	419,810	421,865	423,144	424,001	424,631	425,143	425,596	426,025	426,449	426,878
11a	34	Non-Office	Linear LED tube (VEU)	1,421,023	1,988,080	2,452,406	2,828,992	3,131,337	3,371,494	3,560,124	3,706,561	3,818,879	3,903,982	3,967,691	4,014,843	4,049,398	4,074,540	4,092,787	4,106,091
11b	34	Non-Office	Linear LED panel (VEU)	22,940	24,099	25,353	26,693	28,114	29,613	31,186	32,817	34,493	36,215	37,982	39,785	41,627	43,510	45,435	47,406
14a	34	Office	Downlight LED (VEU)	174,913	178,922	182,565	185,873	188,878	191,605	194,079	196,324	198,358	200,202	201,873	203,386	204,756	205,998	207,122	208,141
16a	34	Office	Bay/shop LED (VEU)	51,953	58,599	64,526	69,800	74,483	78,632	82,297	85,525	88,361	90,844	93,012	94,896	96,530	97,940	99,154	100,194
22a	34	Office	Linear LED tube (VEU)	250,395	334,224	409,413	476,736	536,900	590,551	638,286	680,651	718,147	751,239	780,353	805,882	828,190	847,613	864,459	879,013
22b	34	Office	Linear LED panel (VEU)	2,571	2,779	3,005	3,247	3,503	3,774	4,056	4,351	4,657	4,974	5,302	5,640	5,988	6,347	6,717	7,097
25a	34	Industrial	Downlight LED (VEU)	81,104	86,187	90,341	93,706	96,410	98,564	100,265	101,597	102,634	103,437	104,056	104,536	104,910	105,206	105,447	105,648
27a	34	Industrial	Bay/shop LED (VEU)	418,841	436,548	444,762	448,691	450,692	451,833	452,598	453,206	453,756	454,296	454,847	455,418	456,017	456,646	457,308	458,005
33a	34	Industrial	Linear LED tube (VEU)	785,826	900,769	989,520	1,057,171	1,108,046	1,145,764	1,173,320	1,193,151	1,207,212	1,217,043	1,223,835	1,228,491	1,231,680	1,233,887	1,235,457	1,236,626
33b	34	Industrial	Linear LED panel (VEU)	11,226	11,452	11,695	11,952	12,223	12,506	12,802	13,108	13,421	13,741	14,068	14,403	14,745	15,094	15,452	15,819
35a	35	Non-building	Bay/shop LED (VEU)	129	246	352	449	537	618	691	758	820	877	929	977	1,021	1,062	1,100	1,136
39a	35	Non-building	Linear LED tube (VEU)	1,477	2,924	4,339	5,724	7,079	8,403	9,697	10,961	12,194	13,397	14,569	15,711	16,821	17,900	18,949	19,966
39b	35	Non-building	Linear LED panel (VEU)	18	37	59	82	108	136	165	197	231	266	304	344	386	429	473	520
41a	27	Public	Public LED equ MV 80W (VEU)	1,012	1,993	2,945	3,871	4,770	5,646	6,498	7,330	8,140	8,932	9,705	10,461	11,200	11,924	12,634	13,329
43a	27	Public	Public LED equ MV 125W (VEU)	32	63	94	123	152	180	208	235	261	287	312	336	361	384	407	430
45a	27	Public	Public LED equ HPS 100W (VEU)	53	105	156	205	253	300	346	391	435	478	520	561	601	641	679	717
47a	27	Public	Public LED equ HPS 150W (VEU)	1,349	2,666	3,951	5,206	6,433	7,631	8,803	9,949	11,070	12,167	13,240	14,291	15,319	16,326	17,312	18,278
49a	27	Public	Public LED equ HPS 250W (VEU)	1,331	2,631	3,901	5,139	6,347	7,525	8,672	9,789	10,876	11,934	12,961	13,959	14,927	15,866	16,776	17,656
51a	27	Public	Public LED equ HPS 400W (VEU)	291	575	850	1,117	1,375	1,626	1,868	2,101	2,327	2,544	2,753	2,953	3,146	3,329	3,497	3,651

Upgrade fixture energy (MWh per 6 months)

ID	Part	Sector	Fixture	2018a	2018b	2019a	2019b	2020a	2020b	2021a	2021b	2022a	2022b	2023a	2023b	2024a	2024b	2025a	2025b
3a	34	Non-Office	Downlight LED (VEU)	14,901	15,480	15,923	16,250	16,478	16,620	16,692	16,703	16,667	16,590	16,481	16,348	16,195	16,027	15,849	15,663
5a	34	Non-Office	Bay/shop LED (VEU)	36,028	43,318	46,945	48,587	49,154	49,142	48,819	48,333	47,763	47,153	46,525	45,893	45,263	44,639	44,023	43,416
11a	34	Non-Office	Linear LED tube (VEU)	98,002	135,083	164,169	186,580	203,469	215,836	224,544	230,325	233,797	235,475	235,781	235,057	233,577	231,554	229,154	226,501
11b	34	Non-Office	Linear LED panel (VEU)	1,582	1,637	1,697	1,760	1,827	1,896	1,967	2,039	2,112	2,184	2,257	2,329	2,401	2,473	2,544	2,615
14a	34	Office	Downlight LED (VEU)	2,585	2,605	2,619	2,627	2,630	2,628	2,623	2,614	2,602	2,588	2,571	2,552	2,531	2,509	2,485	2,460
16a	34	Office	Bay/shop LED (VEU)	2,642	2,936	3,186	3,395	3,569	3,712	3,828	3,919	3,990	4,041	4,076	4,097	4,106	4,105	4,094	4,076
22a	34	Office	Linear LED tube (VEU)	10,361	13,626	16,444	18,865	20,932	22,684	24,155	25,377	26,380	27,187	27,824	28,309	28,663	28,902	29,040	29,093
22b	34	Office	Linear LED panel (VEU)	106	113	121	128	137	145	154	162	171	180	189	198	207	216	226	235
25a	34	Industrial	Downlight LED (VEU)	1,998	2,091	2,160	2,207	2,237	2,254	2,259	2,255	2,244	2,228	2,208	2,186	2,161	2,135	2,109	2,081
27a	34	Industrial	Bay/shop LED (VEU)	106,516	109,378	109,789	109,122	107,989	106,663	105,264	103,848	102,437	101,044	99,671	98,321	96,996	95,694	94,417	93,163
33a	34	Industrial	Linear LED tube (VEU)	54,195	61,204	66,241	69,724	71,999	73,349	74,003	74,142	73,907	73,408	72,727	71,925	71,046	70,121	69,173	68,215
33b	34	Industrial	Linear LED panel (VEU)	774	778	783	788	794	801	807	815	822	829	836	843	851	858	865	873
35a	35	Non-building	Bay/shop LED (VEU)	29	55	78	98	116	131	145	156	167	175	183	190	195	200	204	208
39a	35		Linear LED tube (VEU)	92	179	261	340	414	484	550	613	672	727	779	828	873	916	955	991
39b	35	Non-building	Linear LED panel (VEU)	1	2	4	5	6	8	9	11	13	14	16	18	20	22	24	26
41a	27	Public	Public LED equ MV 80W (VEU)	45	87	127	164	199	232	263	293	320	346	371	394	415	436	455	473
43a	27	Public	Public LED equ MV 125W (VEU)	2	4	6	8	10	12	13	15	16	17	19	20	21	22	23	24
45a	27	Public	Public LED equ HPS 100W (VEU)	3	6	8	11	13	15	18	20	21	23	25		28	29	31	32
47a	27	Public	Public LED equ HPS 150W (VEU)	112	218	319	414	504	589	669	745	817	885	948	1,008	1,065	1,118	1,168	1,215
49a	27	Public	Public LED equ HPS 250W (VEU)	184	359	525	681	829	968	1,099	1,222	1,338	1,446	1,547	1,642	1,730	1,811	1,887	1,957
51a	27	Public	Public LED equ HPS 400W (VEU)	65	126	183	237	287	335	379	420	458	493	526	556	583	608	629	647

			(MWh per 6 months																				
D	Part	Sector	Baseline	Install	2016b	2017a	2017b	2018a	2018b	2019a	2019b	2020a	2020b	2021a	2021b	2022a	2022b	2023a	2023b	2024a	2024b	2025a	2025b
	34	Non-Office	Downlight CFL	Downlight LED (VEU)				9,141	7,445	6,017	4,824	3,834	3,019	2,354	1,816	1,386	1,045	778	571	413	294	206	
2	34	Non-Office	Downlight halogen	Downlight LED (VEU)				8,216	6,647	5,335	4,245	3,347	2,612	2,018	1,541	1,163	867	637	461	329	230	159	
3	34	Non-Office	Downlight LED (BaU)	Downlight LED (VEU)				31,854	32,252	32,568	32,814	33,003	33,144	33,246	33,317	33,361	33,385	33,392	33,386	33,370	33,346	33,316	33
4	34	Non-Office	Bay/shop HID	Bay/shop LED (VEU)				80,708	44,549	24,590	13,573	7,492	4,135	2,283	1,260	695	384	212	117	65	36	20	
5	34	Non-Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)				33,908	35,870	36,924	37,475	37,747	37,864	37,894	37,875	37,827	37,762	37,685	37,600	37,510	37,413	37,312	37
6	34	Non-Office	Linear T5	Linear LED tube (VEU)				213,203	170,245	134,945	106,136	82,793	64,024	49,054	37,217	27,943	20,747	15,221	11,025	7,877	5,546	3,842	
7	34	Non-Office	Linear T5	Linear LED panel (VEU)				5,382	5,352	5,320	5,287	5,253	5,216	5,179	5,139	5,098	5,055	5,010	4,965	4,921	4,877	4,834	
8	34	Non-Office	Linear T8	Linear LED tube (VEU)				562,016	435,543	333,686	252,525	188,596	138,861	100,685	71,804	50,297	34,551	23,235	15,265	9,775	6,083	3,666	
9	34	Non-Office	Linear T8	Linear LED panel (VEU)				14,549	14,452	14,349	14,242	14,130	14,014	13,892	13,768	13,645	13,524	13,404	13,284	13,166	13,049	12,933	1
10	34	Non-Office	Linear LED tube (BaU)	Linear LED tube (VEU)				163,252	177,868	189,232	197,964	204,584	209,526	213,150	215,749	217,561	218,777	219,546	219,984	220,182	220,205	220,104	21
11	34	Non-Office	Linear LED panel (BaU)	Linear LED panel (VEU)				54,412	59,277	63,056	65,957	68,151	69,784	70,976	71,824	72,407	72,790	73,021	73,139	73,174	73,149	73,079	7
12	34	Office	Downlight CFL	Downlight LED (VEU)				1,681	1,496	1,330	1,180	1,045	924	815	717	630	552	482	420	364	315	272	
13	34	Office	Downlight halogen	Downlight LED (VEU)				689	586	497	418	350	291	240	196	158	127	100	77	58	43	30	
14	34	Office	Downlight LED (BaU)	Downlight LED (VEU)				5,133	5,187	5,233	5,272	5,306	5,335	5,359	5,380	5,396	5,410	5,421	5,429	5,435	5,440	5,443	
15	34	Office	Bay/shop HID	Bay/shop LED (VEU)				15,810	13,657	11,760	10,093	8,633	7,357	6,245	5,279	4,443	3,722	3,102	2,572	2,121	1,739	1,416	
16	34	Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)				4,010	4,400	4,737	5,025	5,272	5,482	5,659	5,809	5,934	6,038	6,124	6,195	6,252	6,297	6,333	
17	34	Office	Linear T5	Linear LED tube (VEU)				36,259	31,501	27,301	23,600	20,345	17,489	14,989	12,805	10,903	9,251	7,820	6,585	5,522	4,611	3,832	
18	34	Office	Linear T5	Linear LED panel (VEU)				848	846	844	842	839	837	835	832	830	827	824	821	818	815	811	
19	34	Office	Linear T8	Linear LED tube (VEU)				107,773	93,771	81,352	70,359	60,651	52,098	44,584	38,001	32,252	27,248	22,910	19,163	15,941	13,184	10,836	
20	34	Office	Linear T8	Linear LED panel (VEU)				2,514	2,508	2,501	2,493	2,486	2,478	2,469	2,461	2,452	2,442	2,433	2,422	2,412	2,401	2,389	
21	34	Office	Linear LED tube (BaU)	Linear LED tube (VEU)				26,787	29,504	31,859	33,895	35,649	37,153	38,438	39,530	40,454	41,231	41,880	42,418	42,860	43,220	43,509	
22	34	Office	Linear LED panel (BaU)	Linear LED panel (VEU)				8,929	9,835	10,620	11,298	11,882	12,383	12,811	13,175	13,482	13,740	13,956	14,134	14,280	14,398	14,493	
23	34	Industrial	Downlight CFL	Downlight LED (VEU)				742	560	416	305	220	156	108	74	49	31	20	12	7	3	2	
24	34	Industrial	Downlight halogen	Downlight LED (VEU)				1,424	1,124	879	681	521	395	295	218	159	114	80	56	38	25	17	
25	34	Industrial	Downlight LED (BaU)	Downlight LED (VEU)				3,254	3,305	3,343	3,371	3,392	3,407	3,417	3,423	3,426	3,427	3,426	3,425	3,422	3,419	3,415	
26	34	Industrial	Bay/shop HID	Bay/shop LED (VEU)				36,065	16,318	7,383	3,341	1,512	684	309	140	63	29	13	6	3	1	1	
27	34	Industrial	Bay/shop LED (BaU)	Bay/shop LED (VEU)				63,047	63,779	64,006	63,999	63,880	63,705	63,497	63,269	63,023	62,761	62,485	62,193	61,886	61,562	61,220	
28	34	Industrial	Linear T5	Linear LED tube (VEU)				25,057	19,191	14,566	10,949	8,146	5,995	4,360	3,131	2,218	1,548	1,064	718	476	309	196	
29	34	Industrial	Linear T5	Linear LED panel (VEU)				658	655	651	647	643	638	634	629	624	618	613	607	602	597	591	
30	34	Industrial	Linear T8	Linear LED tube (VEU)				99,752	72,764	52,275	36,944	25,649	17,468	11,651	7,596	4,831	2,989	1,794	1,041	581	311	158	
31	34	Industrial	Linear T8	Linear LED panel (VEU)				2,734	2,716	2,696	2,676	2,655	2,633	2,610	2,587	2,564	2,541	2,519	2,496	2,474	2,452	2,430	
32	34	Industrial	Linear LED tube (BaU)	Linear LED tube (VEU)				35,434	37,764	39,468	40,692	41,555	42,148	42,542	42,794	42,944	43,022	43,051	43,047	43,020	42,979	42,927	4
33	34	Industrial	Linear LED panel (BaU)	Linear LED panel (VEU)				11,810	12,585	13,151	13,557	13,842	14,037	14,165	14,246	14,291	14,313	14,318	14,311	14,296	14,276	14,251	
34	35	Non-building	Bay/shop HID	Bay/shop LED (VEU)				2,398	2,171	1,966	1,780	1,612	1,460	1,322	1,197	1,084	981	889	805	729	660	597	
35	35	Non-building	Bay/shop LED (BaU)	Bay/shop LED (VEU)				553	612	665	713	756	795	830	861	889	914	936	956	973	989	1,002	
36	35	Non-building	Linear T8	Linear LED tube (VEU)				18,397	17,175	16,022	14,934	13,907	12,939	12,027	11,167	10,357	9,595	8,878	8,204	7,570	6,976	6,419	
37	35		Linear T8	Linear LED panel (VEU)				400	398	395	393	390	388	385	382	379	376	373	369	366	363	360	
8	35	Non-building	Linear LED tube (BaU)	Linear LED tube (VEU)				1,822	2,164	2,484	2,781	3,058	3,315	3,554	3,775	3,980	4,169	4,344	4,504	4,652	4,788	4,912	
39	35		Linear LED panel (BaU)	Linear LED panel (VEU)				783	897	1,003	1,102	1,194	1,279	1,359	1,432	1,500	1,562	1,620	1,673	1,721	1,765	1,806	
40	27	Public	Public MV 80W	Public LED equ MV 80W (VEU)				26,407	24,910	23,495	22,159	20,896	19,702	18,575	17,509	16,502	15,551	14,652	13,802	12,999	12,241	11,524	
41	27	Public		Public LED equ MV 80W (VEU)				15,459	16,102	16,706	17,275	17,809	18,311	18,783	19,226	19,642	20,032	20,398	20,741	21,063	21,364	21,646	
12	27	Public	Public MV 125W	Public LED equ MV 125W (VEU)				990	934	880	829	781	735	693	652	614	577	543	511	480	451	424	
3	27	Public		Public LED equ MV 125W (VEU)				458	483	505	527	547	566	584	600	616	631	644	657	669	680	691	
4	27	Public	Public HPS 100W	Public LED equ HPS 100W (VEU)				1.591	1,495	1,405	1,321	1.240	1,165	1,093	1.025	962	901	845	791	740	693	647	
15	27	Public		Public LED equ HPS 100W (VEU)				406	445	482	517	549	579	608	634	659	683	704	725	743	761	777	
16	27	Public	Public HPS 150W	Public LED equ HPS 150W (VEU)				47.246	44,396	41.704	39,160	36,757	34,487	32,344	30,319	28,408	26.603	24,900	23,292	21.775	20,344	18,994	
17	27	Public		Public LED equ HPS 150W (VEU)				8.342	9,514	10,613	11,643	12,609	13,513	14,360	15,151	15,892	16,583	17,228	17,830	18.390	18,912	19,397	
	27	Public	Public HPS 250W	Public LED equ HPS 250W (VEU)				42.644	39,722	36,967	34,373	31,930	29,630	27,467	25,433	23,522	21,727	20,043	18,464	16,985	15,601	14,306	
8		I UDIIC	I GOILG TES ZOUVV	I done LED equ nr3 230W (VEU)																			
		Dublic	Bublic LED on LUBS 25 OW (Ball)	Dublic LED on LUDE 25 OW (VELL)																			
18 19 10	27	Public Public	Public LED equ HPS 250W (BaU) Public HPS 400W	Public LED equ HPS 250W (VEU) Public LED equ HPS 400W (VEU)				6,998 10.858	8,055 10.037	9,038 9,267	9,951 8,544	10,797 7.866	11,582 7.231	12,307 6.636	12,977 6.081	13,595 5.562	14,164 5.077	14,687 4.626	15,167 4,207	15,606 3.817	16,006 3.456	16,371 3.130	

21B. Bi-Annual energy savings (MWh) (for ALL fixtures installed from 2021 onwards)

ID		Sector		Install 2016b		2010: 2010!	2010	2019b 2020a 202		00041		0001 00				0000	20251	2020	20201 2027	20271	2020	20201 4		0001 0000			20241	2000	0000	20221		200 H	and and a
שו	Part				201/3 201/6	20185 20180	20193	20196 20203 202	D 2021a	20215	20228 2	0226 20	230 202	10 2024	3 20240	2025a	20255	20263	20265 20273	20276	20283	20285	U29a 2	0296 2030	Ja 2031	D 2031a	20310	20328 2	.0320 20338	20330	20343	20340 2	U35a 2U35b
1	34			ight LED (VEU)					367	669	914	1,112	1,269 1,	393 1,	489 1,562	1,617	7 1,657	1,657	1,657 1,65	1,657	1,657	1,657	1,657	1,657 1,	657 1,	657 1,291	989	743	545 38	38 265	169	96	41 0
2	34	Non-Office		ight LED (VEU)					317	576	784				260 1,318			1,392	1,392 1,39		1,392	1,392	1,392	1,392 1,	392 1	392 1,075	816	608	442 31	11 210	0 133	74	31 0
3	34	Non-Office		ight LED (VEU)					15	31	48	65			120 139	159		180	180 18		180	180	180	180	180	180 165	149	132	115 9	98 79) 61	41	21 0
4	34	Non-Office		op LED (VEU)					1,275	1,982					815 2,836				2,853 2,85		2,853	2,853	2,853	2,853 2,	853 2	853 1,578	871	479	262 14	12 75	, 38	18	6 0
5		Non-Office		op LED (VEU)					40	83	127	175			332 390	451		516	516 51		516	516	516	516	516	516 476	433	388	341 25	239	3 184	126	65 0
6	34	Non-Office	Linear TS Linear LE	LED tube (VEU)					8,602	15,553	21,116	25,522 2	8,974 31,	646 33,	689 35,229	36,373	37,209	28,607	21,656 16,09	11,687	8,235	5,563	3,521	1,981	837	0 0	0	0	0	0 0	J 0	0	0 0
7	34	Non-Office	Linear TS Linear LE	LED panel (VEU)					27	55	85	117	149	182	215 247	280	312	312	312 31:	312	312	312	312	312	312	312 285	256	227	195 1/	52 130	J 97	65	32 0
8	34	Non-Office	Linear T8 Linear LE	LED tube (VEU)					22,623	39,925	52,943	62,562 6	9,533 74,	480 77,	908 80,225	81,745	82,712	60,090	42,787 29,770	20,151	13,179	8,233	4,804	2,488	967	0 0	0	0	0	0 0	0	0	0 0
9	34	Non-Office	Linear T8 Linear LE	LED panel (VEU)					89	180	271	361	451	541	630 719	807	7 895	895	895 895	895	895	895	895	895	895	895 806	715	624	534 4	14 355	5 265	177	88 0
10	34	Non-Office		LED tube (VEU)					121	249	383	523	668	820	977 1.141	1.312	1.490	1.368	1.241 1.10	967	822	670	512	348	178	0 0	0	0	0	0 0	0	0	0 0
11	34	Non-Office	Linear LED panel (BaU) Linear LE	LED panel (VEU)					48	99	154	211	272	337	405 477	553	3 633	633	633 63	633	633	633	633	633	633	633 585	534	479	421 3	50 296	6 228	156	80 0
12	34	Office		ight LED (VEU)					53	101	145	186	222	256	286 313	338	360	360	360 36	360	360	360	360	360	360	360 307	259	215	174 1	88 104	4 74	47	22 0
13	34	Office		ight LED (VEU)					17	21	42	52	61	69	74 79	92	94	9.4	94 9	94	9.4	9.4	9.4	9.4	94	94 67	52	41	21	22 16	6 10	- 6	2 0
14	34	Office		ight LED (VEU)							73	10	12	16	10 21	34	1 27	27	27 2	2 27	27	27	27	27	27	27 24	22	10	17	10	1 0		2 0
15	34	Office		op LED (VEU)					577	1.005	1 532	1 924	2 265 2	562 2:	818 3 038	3 226	2 2 200	2 206	2 200 2 200	2 2 2 2 2 2	2 206	2 206	2.200	2 206 2	206 2	27 24	2 201	1.054	1462 11	14 11	£ 560	240	160 0
16	34	Office		op LED (VEU)					3//	1,085	1,552	1,524			27 32	3,220	5 41	3,300 41	41 4	3,300	3,300	3,300	3,300	3,300 3,	41	A1 20	2,301	1,034	1,405 1,12	12 10	0 14	340	100 0
17	34	Office		LED tube (VEU)					1 075	2 224					393 5.841	6.232		5,496	4 540 3 69		2.275	41	1 178	720	41	41 30	34	30	20 2	2 10	. 14		3 0
18	34	Office							1,075	2,031	2,880	3,632		12	393 5,841	6,232	2 6,5/1	5,496	4,540 3,69	2,939	2,275	1,691	1,178	/30	339	0 0	- 0	- 0		0 0			0 0
				LED panel (VEU)					2	4	5	,		12	14 16	19	9 21	21	Z1 Z	L 21	21	21	21	21	21	21 20	18	16	14 1	12 10		5	3 0
19	34	Office		LED tube (VEU)					3,685	6,967	9,881	12,458 1	4,729 16,	720 18,	460 19,971	21,277	7 22,399	18,714	15,431 12,51	9,941	7,670	5,678	3,939	2,428 1,	122	0 0	0	0	U	0 0	. 0	0	0 0
20		Office		LED panel (VEU)					- 6	12	19	26	33		49 57	66	5 75	75	75 7	5 75	75	75	75	75	75	75 69	63	56	49 4	12 34	, 26	18	9 0
21	34	Office		LED tube (VEU)					20	40	62	84	108	132	157 183	209	236	217	196 17	152	129	104	79	54	27	0 0	0	0	0	0 0	0	0	0 0
22	34	Office		LED panel (VEU)					7	14	21	29	38	46	55 64	74	1 84	84	84 84	84	84	84	84	84	84	84 77	70	63	55 4	17 38	, 29	20	10 0
23	34	Industrial		ight LED (VEU)					24	41	54	62	68	72	74 76	77	7 77	77	77 7	7 77	77	77	77	77	77	77 53	36	24	15	9 5	, 3	1	0 0
24	34	Industrial		ight LED (VEU)					60	107	144	172	194	210	222 230	236	5 240	240	240 24	240	240	240	240	240	240	240 180	133	96	67 4	6 30	, 18	10	4 0
25	34	Industrial		ight LED (VEU)					2	3	5	7	8	10	12 14	16	5 19	19	19 1	9 19	19	19	19	19	19	19 17	15	14	12 2	10 8	, 6	4	2 0
26	34	Industrial		op LED (VEU)					264	383	438	463			481 482	483	3 483	483	483 48		483	483	483	483	483	483 219	100	45	20	9 4	. 2	1	0 0
27	34	Industrial		op LED (VEU)					123	255	395	545			055 1,248	1,453		1,671	1,671 1,67		1,671	1,671	1,671	1,671 1,	671 1	671 1,547	1,416	1,275	1,126 96	66 796	615	423	218 0
28	34	Industrial		LED tube (VEU)					1,007	1,779	2,364	2,801	3,123 3,	356 3,	523 3,639	3,719	3,772	2,765	1,993 1,400	971	649	416	249	133	53	0 0	0	0	0	0 0	J O	0	0 0
29	34	Industrial		LED panel (VEU)					3	7	10	14	18	22	26 30	34	4 38	38	38 3	38	38	38	38	38	38	38 35	31	28	24 2	20 16	j 12	8	4 0
30	34	Industrial		LED tube (VEU)					3,557	6,060	7,782	8,936	9,690 10,	168 10,	460 10,632	10,730	10,782	7,224	4,721 3,000	1,845	1,091	614	321	149	52	0 0	0	0	0	0 0	J 0	0	0 0
31	34	Industrial	Linear T8 Linear LE	LED panel (VEU)					17	34	51	68	85	102	118 135	152	2 168	168	168 168	168	168	168	168	168	168	168 151	134	117	100 8	33 67	/ 50	33	17 0
32	34	Industrial	Linear LED tube (BaU) Linear LE	LED tube (VEU)					24	50	76	104	133	162	193 225	259	293	269	243 21	7 189	161	131	100	68	35	0 0	0	0	0	0 0	0	0	0 0
33	34	Industrial	Linear LED panel (BaU) Linear LE	LED panel (VEU)					10	20	31	42	54	67	80 94	109	124	124	124 124	124	124	124	124	124	124	124 115	105	94	82	70 58	8 44	30	16 0
34	35	Non-building	Bay/shop HID Bay/shop	op LED (VEU)					50	96	138	176	210	241	270 296	319	340	340	340 34	340	340	340	340	340	340	340 290	244	203	165 13	80 99	3 71	45	21 0
35	35	Non-building	Bay/shop LED (BaU) Bay/shop	op LED (VEU)					1	2	3	4	6	7	9 10	12	2 14	14	14 1	14	14	14	14	14	14	14 13	12	11	10	9 7	/ 6	4	2 0
36	35	Non-building	Linear T8 Linear LE	LED tube (VEU)					194	385	571	752	930 1,	102 1,	271 1,434	1,593	3 1,747	1,553	1,363 1,17	995	818	645	477	313	154	0 0	0	0	0	0 0	0	0	0 0
37	35	Non-building	Linear T8 Linear LE	LED panel (VEU)					2	4	6	9	11	14	16 18	21	1 23	23	23 2	3 23	23	23	23	23	23	23 21	19	17	15	12 10	3 7	5	2 0
38	35	Non-building	Linear LED tube (BaU) Linear LE	LED tube (VEU)					2	4	6	9	11	14	17 20	24	1 27	26	23 2	1 19	16	13	10	7	4	0 0	0	0	0	0 0	0	0	0 0
39	35	Non-building	Linear LED panel (BaU) Linear LE	LED panel (VEU)					1	2	3	4	5	6	8 9	11	1 13	13	13 1	3 13	13	13	13	13	13	13 12	11	10	9	8 6	á 5	3	2 0
40	27	Public	Public MV 80W Public LE	LED equ MV 80W (VEU)					116	227	335	439	539	635	729 819	906	990	990	990 99	990	990	990	990	990	990	990 874	763	655	552 45	355	5 262	172	84 0
41	27	Public	Public LED equ MV 80W (BaU) Public LE						13	26	40	55	69	84	100 116	132	2 148	148	148 14	3 148	148	148	148	148	148	148 135	122	108	94	79 64	4 49	33	17 0
42	27	Public	Public MV 125W Public LE	LED equ MV 125W (VEU)					5	9	14	18	22	26	30 34	38	R 41	41	41 4	41	41	41	41	41	41	41 37	32	28	23	19 15	5 11	7	4 0
43	27	Public	Public LED equ MV 125W (BaU) Public LE						0	1	1	1	2	2	3 3	4	1 4	4	4 .	4	4	4	4	4	4	4 4	3	3	3	2 2	2 1	1	0 0
44	27	Public		LED equ HPS 100W (VEU)					11	22	33	43	53	63	72 81	90	99	99	99 9	99	99	99	99	99	99	99 88	77	66	56	16 36	6 27	18	9 0
45	27	Public	Public LED equ HPS 100W (BaU) Public LE							1	1	2	3	3	4 4	5	5 6	6	6	. 6	6	6	6	6	6	6 5	- 5	4	4	3 3	4 2	1	1 0
46	27	Public		LED equ HPS 150W (VEU)					336	664	984	1 296	1 600 1	896 2	184 2 466	2 740	3 007	3.007	3 007 3 00	7 3.007	3.007	3.007	3 007	3.007 3.0	007 3	007 2 670	2 342	2 023	1 711 1 4	7 1 111	1 822	541	267 0
47		Public	Public LED equ HPS 150W (BaU) Public LE						10	20	21	42	56	69	92 97	112		128	128 12	3,007	128	128	128	129	128	128 118	109	97	96	22 60	0 46	21	16 0
48	27	Public		LED equ HPS 250W (VEU)					543	1 071	1 583	2 081	2 564 3	031 3	484 3.920	4.342		4.747	4.747 4.74		4.747	4.747	4.747			747 4 205	2 677	3 164	2666 21	24 1716	6 1 264	927	406 0
49	27	Public	Public LED equ HPS 250W (BaU) Public LE						343	1,071	20	41	E4 3,		81 97	113		130	130 13		130	130	130			130 120	111	100	2,000 2,10	1,710	1,204	227	17 0
50	27	Public		LED equ HPS 250W (VEU)					185	364	536	702	861 1.		160 1.298	1.424			1.538 1.53		1.538		1.538			538 1.353	1.174	1.002	836 67	77 525	5 379	33	114 0
	27	Public	Public LED equ HPS 400W (BaU) Public LE						185	304	530	702			160 1,298 19 23	1,424		1,538	1,538 1,533 31 3		1,538	1,538	1,538	1,038 1,	226 1	25 253	1,1/4	1,002	030 67	525	379	240	114 0
51	21	Fuulic	rubiic LED equines 400W (BBU) PUBLIC LE	LED equines 400W (VEU)					2	4	- /	9	12	15	15 23	21	31	31	31 3	31	31	31	51	31	31	51 29	27	24	21 1	10 15	12	8	4 0

21A. Bi-Annual energy savings (MWh) (for ALL fixtures installed from 2018 onwards)

																																		_			
ID			Baseline		2016b 2017a	20176 20			9a 2019b	2020a	20206	2021a	2021Б	2022a 2	20226 2	023a 202	36 202	24a 2024b	2025a	2025b	2026a	2026b 2027	20276	2028a	2028Б 2	029a	20296 2030	203	b 2031a	20316	2032a	20326 203	3a 203	3b 2034a	2034b	2035a 2035b	ė.
1			Downlight CFL	Downlight LED (VEU)				1,842	,575 3,19	8 3,726	4,167	4,534	4,836	5,081	5,279	5,436 5	,560 5	5,656 5,729	9 5,78	4 5,825	5,825	5,825 5,8	25 5,825	4,836	3,982	3,250	2,626 2,	199 1	657 1,291	989	743	545	388	265 16	39 9F	š 41	0
2	34	Non-Office	Downlight halogen	Downlight LED (VEU)				1,661	,315 2,86	8 3,332	3,718	4,035	4,294	4,502		4,799 4	,900 4	1,977 5,03	5 5,07	8 5,110	5,110	5,110 5,1	10 5,110	4,216	3,448	2,794	2,241 1,	78 1	392 1,075	816	608	442	311	210 13	33 7/	4 31	0
3	34	Non-Office	Downlight LED (BaU)	Downlight LED (VEU)			12	25	38 5	2 67	82	97	113	130	147	164	182	201 22:	1 24:	1 262	262	262 2	62 262	250	237	224	210	.95	180 165	149	132	115	98	79 6	61 4"	1 21	0
4	34	Non-Office	Bay/shop HID	Bay/shop LED (VEU)			42,517	66.846 80	.338 87.82	0 91.969	94.269	95,544	96.251	96.643	96,860	96.980 97	.047 97	7,084 97,105	5 97.11	6 97,122	97,122	97.122 97.1	22 97,122	54.605	30.276	16,784	9.302 5.	.53 2	853 1.578	871	479	262	142	75 3	38 1/	8 6	0
5		Non-Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)			24	52	84 1	7 154	192	232	274	319	366	416	468	523 583			708	708 7	08 708	683	655	624	590	54	516 476	433	388	341	292	239 15	84 126	6 65	0
6	34	Non-Office		Linear LED tube (VEU)				48.038 66	.565 82.04									2.540 58.60			28,607	21.656 16.0	93 11.687	8.235	5.563	3.521	1.981	27	0 0		0	0	0	0	0 (0 0	0
7		Non-Office		Linear LED panel (VEU)			20	41	63 8	6 110		163	191	221	253			351 38			448		48 448	428	407	385	262	137	212 205	256	227	105	163	120 (07 6	f 22	0
8		Non-Office	Linear T8	Linear LED tube (VEU)				155.373 212						378.175		09 650 244		331 36					70 20.151	13.179	8.233	4 804	2 488	137	312 203	230	227	193	102	130 5	0	3 32	0
							85,116 1																					167	0 0	U	U	U	U	U	0 0	, ,	0
9		Non-Office	Linear T8	Linear LED panel (VEU)			66	136	209 28		452	541	632	723	813			1,082 1,170			1,347	1,347 1,3		1,281		1,138	1,061	80	895 806	715	624	534	444	355 26	35 177	/ 88	0
10	34	Non-Office	Linear LED tube (BaU)	Linear LED tube (VEU)			70	151	242 34			686	814	947				1,300 1,364			1,368	1,241 1,1		822	670	512	348	.78	0 0	0	0	0	0	0	0 0	3 0	0
	34	Non-Office	Linear LED panel (BaU)	Linear LED panel (VEU)			26	55	90 12			262	313	367	425	486		618 690	76	6 846	846	846 8	46 846	821	791	757	719	78	633 585	534	479	421	360	296 27	28 15F	ó 80	0
12	34	Office	Downlight CFL	Downlight LED (VEU)			88	169	243 3:	2 374	432	485	533	577	618	654	688	718 745	5 770	0 792	792	792 7	92 792	704	623	549	480	18	360 307	259	215	174	138	104 7	74 47	7 22	0
13	34	Office	Downlight halogen	Downlight LED (VEU)			38	71	100 12	5 148	167	184	198	210	220	228	235	241 245	5 249	9 251	251	251 2	51 251	213	180	151	126	.03	84 67	53	41	31	23	16 7	10 /	6 2	0
14	34	Office	Downlight LED (BaU)	Downlight LED (VEU)			2	4	6	8 11	13	16	18	21	23	26	29	31 34	4 3	7 40	40	40	40 40	38	36	34	32	29	27 24	22	19	17	14	11	9 /	6 3	0
15	34	Office	Bay/shop HID	Bay/shop LED (VEU)			1 152	2 184 3	108 3 93	2 4 666	5 3 1 7	5 894	6.403	6.850	7 241	7 583 7	879 8	3 135 8 359	5 8 54	4 8 704	8 704	8 704 8 7	04 8 704	7 552	6.520	5 596	4 772 4	138 3	386 2.810	2 301	1.854	1 463 1	1 121	825 5/	69 341	8 160	0
16	34	Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)			2	4	7	0 13	16	20	23	27	31	35	39	44 41	8 5	3 57	57	57	57 57	55	53	50	47	44	41 38	34	30	26	22	18	14 /	9 5	0
17		Office	Linear TS	Linear LED tube (VEU)			2.074	3 940	.618 7.12			10 749	11 706		13 306	11 996 10	614 9	9 450 8 39			5,496	4 540 3 6	91 2 939	2.275	1 691	1 178	720	20	0 0		0	0	0	0	0 (0 0	0
18	34	Office	Linear TS	Linear LED panel (VEU)			1,074	3,340 .	4	6 3,470	3,073	10,743	12,700	14	16	18	30	23 21	5 7,431	0 0,571	3,430	30	30 30	2,270	2,032	26	26	22	21 20	10	16	14	12	10	7		0
19	34	Office	Linear T8	Linear LED tube (VEU)			6.978	13.287 18	070 0111	4 20 700	22.022	20.510	20 000		10	40 583 36	20	23 28 69	0 05 10	0 30	18.714	15.431 12.5	30 30	2.5	E 670	2.020	2.5	23	21 20	10	10	14	12	10	, ,	, ,	0
							6,978	13,28/ 18	,979 24,10	4 28,708	32,832	36,518	39,800		45,291			2,313 28,69	9 25,40					7,670	5,678	3,939	2,428 1,	.22	0 0	U		U	U	U			U
20	34	Office	Linear T8	Linear LED panel (VEU)			5	9	15 2	0 25	31	37	44	50	57	64	72	80 81	8 9		106		06 106	102	97	92	87	81	75 69	63	56	49	42	34 2	26 18	3 9	0
21		Office	Linear LED tube (BaU)	Linear LED tube (VEU)			11	24	38 5	4 71	90	109	130	152	174	186	198	208 218			217		75 152	129	104	79	54	27	0 0	0	. 0	. 0	0	. 0	0 0	J O	0
22	34	Office	Linear LED panel (BaU)	Linear LED panel (VEU)			4	8	13	8 24	30	37	44	52	60	68	76	85 9	5 10		115		15 115	111	107	102	96	90	84 77	70	63	55	47	38 2	29 20	J 10	0
	34	Industrial	Downlight CFL	Downlight LED (VEU)			108	194	263 3:	7 359	390	414	432	444	453	459		465 469	6 46		468		68 468	360	273	205	151	.09	77 53	36	24	15	9	5	3 1	1 0	0
24	34	Industrial	Downlight halogen	Downlight LED (VEU)			198	365	503 63	7 710	785	845	892	929	957	979	995 1	1,006 1,015	5 1,02	1 1,025	1,025	1,025 1,0	25 1,025	826	660	522	408	15	240 180	133	96	67	46	30 1	18 10	0 4	0
25	34	Industrial	Downlight LED (BaU)	Downlight LED (VEU)			1	3	4	5 7	8	10	12	13	15	17	19	21 2	3 2	5 27	27	27	27 27	26	24	23	22	20	19 17	15	14	12	10	8	6 /	4 2	0
26	34	Industrial	Bay/shop HID	Bay/shop LED (VEU)			29.890	43,479 49	.657 52.46	5 53.742	54.322	54.585	54.705	54.760	54.784	54.796 54	.801 54	1.803 54.804	4 54.80	5 54.805	54.805	54.805 54.8	05 54.805	24.915	11.326	5.148	2.340 1.	163	483 219	100	45	20	9	4	2 .	1 0	0
27	34	Industrial	Bay/shop LED (BaU)	Bay/shop LED (VEU)			79	167	261 36	2 470	586	710	841	982	1.131	1.291 1	.461 1	1.641 1.834	4 2.03	9 2.257	2.257	2.257 2.2	57 2.257	2.178	2.090	1.996	1.895 1	86 1	671 1 547	1 416	1 275	1 126	966	796 6'	15 421	3 218	0
28	34	Industrial	Linear TS	Linear LED tube (VEU)				7.214 9	.824 11.93	2 13.566	14.864	15.871	16.643	17.228				3.562 6.59			2,765	1,993 1,4		649	416	249	133	53	0 0	0	0	0	0	0	0 (0 0	0
	34	Industrial	Linear TS	Linear LED panel (VEU)			2	.,	8 :		17	20	22	27	21	25	20	43 4		1 55	55	55	55 55	52	50	47	44	41	29 25	21	20	24	20	16	12	9 4	0
30	34	Industrial	Linear T8	Linear LED tube (VEU)			19.993	35.580 47	.564 56.64		68 358	71.915	74.418	76.139	77.294	58.055 42	.946 31	1.253 22.349		2 10.782	7.224	4.721 3.0	00 1.845	1.091	614	221	140	F2	0 0	0	- 0		-0		0	0 0	0
	34	Industrial	Linear T8				15,555	33,380 41	,304 30,04	1 05,403	00,330	/1,513	74,410	70,135	77,254	170	,540 31							1,051	014	321	193	32	100 0				0			2 42	0
31				Linear LED panel (VEU)			12	26	39 3	4 65	85	102	119	136	153	1/0	186	203 220			253		53 253	241	228	214	199	.84	168 151	134	11/	100	83	6/ 5	/U 33	1 1/	U
32	34	Industrial	Linear LED tube (BaU)	Linear LED tube (VEU)			16	33	53	3 95	119	143	169	195	223		248	260 27:	1 28	2 293	269	243 2	17 189	161	131	100	68	35	0 0	0	0	0	0	0	0 0	3 0	0
33		Industrial	Linear LED panel (BaU)	Linear LED panel (VEU)			6	12	19 2	7 36	45	55	65	76	87		112	125 139	9 15	4 169	169	169 1	69 169	164	157	150	142	.34	124 115	105	94	82	70	58 4	44 30	J 16	0
34	35		Bay/shop HID	Bay/shop LED (VEU)			89	170	243 31	0 371	426	477	522	564	602	636	667	696 723	2 74	5 767	767	767 7	67 767	678	597	523	457	196	340 290	244	203	165	130	99 7	71 45	5 21	0
	35		Bay/shop LED (BaU)	Bay/shop LED (VEU)			0	1	1	2 3	4	5	6	7	8	9	11	12 14	4 1	6 18	18	18	18 18	18	17	16	16	15	14 13	12	11	10	9	7	6 4	4 2	0
36	35	Non-building	Linear T8	Linear LED tube (VEU)			218	433	643 85	0 1,052	1,251	1,445	1,635	1,821	2,003	1,962 1	,920 1	1,878 1,835	5 1,79	2 1,747	1,553	1,363 1,1	77 995	818	645	477	313	.54	0 0	0	0	0	0	0	0 0	0 0	0
37	35	Non-building	Linear T8	Linear LED panel (VEU)			1	3	5	6 8	10	12	14	16	19	21	24	26 29	9 3:	1 34	34	34	34 34	32	30	29	27	25	23 21	19	17	15	12	10	7 /	5 2	0
38	35	Non-building	Linear LED tube (BaU)	Linear LED tube (VEU)			1	2	3	4 5	7	9	11	13	16	18	19	21 2	3 2	5 27	26	23	21 19	16	13	10	7	4	0 0	0	0	0	0	0	0 (0 0	0
39	35	Non-building	Linear LED panel (BaU)	Linear LED panel (VEU)			0	1	1	2 2	3	4	5	6	7	8	9	11 13	2 1	4 16	16	16	16 16	15	15	14	14	13	13 12	11	10	9	8	6	5 7	3 2	0
40	27	Public	Public MV 80W	Public LED equ MV 80W (VEU)			147	288	423 55	3 678	798	914	1.026	1.133	1.237	1.337 1	.434 1	1.527 1.613	7 1.70	4 1.789	1,789	1.789 1.7	89 1.789	1.642	1.501	1.366	1.236 1.	11	990 874	763	655	552	452	355 26	62 17.	2 84	0
41	27	Public	Public LFD equ MV 80W (Rall)	Public LED equ MV 80W (VEU)			10	20	32 4	3 50	68	81	94	108	122	137	152	167 183	3 19	9 216	216	216 2	16 216	206	196	185	173	61	148 135	122	108	94	79	64 /	49 31	3 17	0
42	27	Public	Public MV 125W	Public LED equ MV 125W (VEU)			6	11	17 1	2 27	22	26	41	45	50	54	5.0	62 61	6 61	0 72	72	72	72 72	67	62	56	61	46	41 27	22	29	22	10	15	11	7 4	0
43		Public		Public LED equ MV 125W (VEU)			0				32	30			30	4	4	4			,,,		6 6		- 02	50		4	4 4	32	20	- 2	2	- 2	<u> </u>	1 0	0
44	27	Public	Public HPS 100W	Public LED eau HPS 100W (VEU)			13	0	20 4		2	2	97	107	118	128	137	147 156	6 16	5 174	174	174 1	74 174	160	147	135	123	11		3	- 3	3	2	200			0
							13	26	39 5	1 63	75	86	97	107	118	128	13/	14/ 15	b 16	5 174	174	1/4 1	/4 174	160	147	135	123	.11	99 88	77	66	56	46	35 2	./ 18	, 9	0
45		Public		J) Public LED equ HPS 100W (VEU)			0	- 1	1	1 2	2	3	3	4	4	5	5	ь :	/	/ 8	8	8	8 8	8	7	7		ь	ь 5	5	4	4	3	3	Z 1	. 1	U
46	27	Public	Public HPS 150W	Public LED equ HPS 150W (VEU)			394	778	,152 1,53		2,215	2,551	2,879	3,199	3,511			1,399 4,68			5,222	5,222 5,2		4,827	4,444	4,070	3,706 3,	52 3,	007 2,670	2,342	2,023	1,711 1	1,407 1	,111 82	22 541	1 267	0
	27			J) Public LED equ HPS 150W (VEU)			5	10	16 2		40	50	60	71	83			122 13			168		68 168	163	158	152	144		128 118	108	97	85	73	60 4	46 31	1 16	0
48	27	Public	Public HPS 250W	Public LED equ HPS 250W (VEU)			631		,849 2,43			4,109	4,637	5,149				7,050 7,483			8,314	8,314 8,3		7,682	7,066	6,464	5,877 5,		747 4,205	3,677	3,164	2,666 2	2,184 1	,716 1,26	64 827	7 406	0
49	27	Public	Public LED equ HPS 250W (Ball	J) Public LED equ HPS 250W (VEU)			4	9	14 2	1 28		46	56	66	78			118 13			166	166 1	66 166	162	157	152	145	.38	130 120	111	100	88	76	62 4	48 37	3 17	0
50	27	Public	Public HPS 400W	Public LED equ HPS 400W (VEU)			222	439	649 85	3 1,051	1,242	1,427	1,606	1,779	1,944	2,103 2	,256 2	2,402 2,540	0 2,660	6 2,781	2,781	2,781 2,7	81 2,781	2,558	2,342	2,132	1,928 1,	30 1	538 1,353	1,174	1,002	836	677	525 37	79 240	0 114	0
51	27	Public	Public LED equ HPS 400W (Ball) Public LED equ HPS 400W (VEU)			1	1	2	4 5	7	9	11	14	16	19	22	26 30	0 3	4 38	38	38	38 38	37	36	35	34	33	31 29	27	24	21	18	15 1	12 8	8 4	0
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20. Bi-Annual energy savings (MWh) (for NEW fixtures installed only; NOT for previously-installed fixtures)

201 01741			83 (INIMALI) (IOI IAEAA																				
ID	Part	Sector	Baseline	Install	2016b	2017a	2017b	2018a	2018b	2019a	2019b	2020a	2020b	2021a	2021b	2022a	2022b	2023a	2023b	2024a	2024b	2025a	2025b
1	34	Non-Office	Downlight CFL	Downlight LED (VEU)				988	854	732	624	527	442	367	302	246	198	157	124	96	73	55	41
2	34	Non-Office	Downlight halogen	Downlight LED (VEU)				894	767	654	553	464	386	317	259	208	166	131	101	77	58	43	31
3	34	Non-Office	Downlight LED (BaU)	Downlight LED (VEU)				12	13	13	14	14	15	15	16	17	17	18	18	19	19	20	21
4	34	Non-Office	Bay/shop HID	Bay/shop LED (VEU)				42,517	24,329	13,492	7,482	4,149	2,300	1,275	707	392	217	120	67	37	20	11	6
5	34	Non-Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)				24	28	31	34	36	38	40	42	45	47	50	52	55	58	61	65
6	34	Non-Office	Linear T5	Linear LED tube (VEU)				26,012	22,026	18,527	15,474	12,828	10,549	8,602	6,951	5,563	4,406	3,452	2,672	2,042	1,540	1,144	837
7	34	Non-Office	Linear T5	Linear LED panel (VEU)				20	21	22	23	24	26	27	28	30	31	33	33	33	32	32	32
8	34	Non-Office	Linear T8	Linear LED tube (VEU)				85,116	70,257	57,388	46,352	36,988	29,132	22,623	17,303	13,017	9,619	6,972	4,946	3,429	2,316	1,521	967
9	34	Non-Office	Linear T8	Linear LED panel (VEU)				66	70	73	77	81	85	89	91	91	90	90	90	89	89	88	88
10	34	Non-Office	Linear LED tube (BaU)	Linear LED tube (VEU)				70	81	91	100	108	115	121	128	134	140	146	152	158	164	171	178
11	34	Non-Office	Linear LED panel (BaU)	Linear LED panel (VEU)				26	30	34	38	41	45	48	51	54	58	61	64	68	72	76	80
12	34	Office	Downlight CFL	Downlight LED (VEU)				88	81	74	68	63	58	53	48	44	40	37	33	30	27	25	22
13	34	Office	Downlight halogen	Downlight LED (VEU)				38	33	29	26	22	19	17	14	12	10	8	7	6	4	3	2
14	34	Office	Downlight LED (BaU)	Downlight LED (VEU)				2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3
15	34	Office	Bay/shop HID	Bay/shop LED (VEU)				1,152	1,032	924	824	734	651	577	509	447	392	341	296	256	220	188	160
16	34	Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)				2	2	3	3	3	3	3//	4	447	4	4	230	4	4	5	5
17	34	Office	Linear T5	Linear LED tube (VEU)				2,074	1,866	1,677	1,505	1,348	1,205	1,075	956	849	752	664	584	513	448	391	339
18	34	Office	Linear T5	Linear LED tube (VEU)				2,074	1,000	1,077	2,303	1,340	1,203	1,073	2	2	732	2	7	2	2	2	3
19	34	Office	Linear T8	Linear LED tube (VEU)				6.978	6,309	5,692	5,125	4.604	4,125	3,685	3,282	2,914	2,577	2,270	1,992	1,739	1,511	1,306	1,122
-	-	Office	Linear T8	Linear LED tube (VEU)				5	5,309		5,125	4,604	4,125	3,085	3,282	2,914	2,5//	2,270	1,992	1,/39	1,511	1,306	1,122
20 21	34 34	Office						11	13	5 14		17	18	20	-	22		23	24	25	26	26	
	-		Linear LED tube (BaU)	Linear LED tube (VEU)				4	4		16	1/	19	20	21 7	8	23	23	24	25	20		27
22	34	Office	Linear LED panel (BaU)	Linear LED panel (VEU)						5	5	6	32	7	17	12	8	8	9	9	9	10	10
23	34	Industrial	Downlight CFL	Downlight LED (VEU)				108	87	69	54	42		24			-		4	2	1	1	U
24	34	Industrial	Downlight halogen	Downlight LED (VEU)				198	166	138	114	93	75	60	47	37	28	21	16	12	8	6	4
25	34	Industrial	Downlight LED (BaU)	Downlight LED (VEU)				1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2
26	34	Industrial	Bay/shop HID	Bay/shop LED (VEU)				29,890	13,589	6,178	2,808	1,276	580	264	120	54	25	11	5	2	1	0	0
27	34	Industrial	Bay/shop LED (BaU)	Bay/shop LED (VEU)				79	87	94	101	108	116	123	132	140	150	159	170	181	193	205	218
28	34	Industrial	Linear T5	Linear LED tube (VEU)				3,978	3,236	2,611	2,088	1,654	1,297	1,007	772	585	437	322	233	166	116	80	53
29	34	Industrial	Linear T5	Linear LED panel (VEU)				2	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4
30	34	Industrial	Linear T8	Linear LED tube (VEU)				19,993	15,587	11,984	9,077	6,764	4,952	3,557	2,503	1,721	1,155	754	477	292	172	97	52
31	34	Industrial	Linear T8	Linear LED panel (VEU)				12	13	14	14	15	16	17	17	17	17	17	17	17	17	17	17
32	34	Industrial	Linear LED tube (BaU)	Linear LED tube (VEU)				16	18	19	21	22	23	24	25	27	28	29	30	31	32	33	35
33	34	Industrial	Linear LED panel (BaU)	Linear LED panel (VEU)				6	7	7	8	9	9	10	10	11	11	12	13	13	14	15	16
34	35	Non-building	Bay/shop HID	Bay/shop LED (VEU)				89	81	74	67	61	55	50	46	42	38	34	31	28	26	23	21
35	35	Non-building	Bay/shop LED (BaU)	Bay/shop LED (VEU)				0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2
36	35	Non-building	Linear T8	Linear LED tube (VEU)				218	214	211	207	203	198	194	190	186	182	177	173	168	164	159	154
37	35	Non-building	Linear T8	Linear LED panel (VEU)				1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
38	35	Non-building	Linear LED tube (BaU)	Linear LED tube (VEU)				1	1	1	1	1	2	2	2	2	2	3	3	3	3	3	4
39	35	Non-building	Linear LED panel (BaU)	Linear LED panel (VEU)				0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2
40	27	Public	Public MV 80W	Public LED equ MV 80W (VEU)				147	141	135	130	125	120	116	112	108	104	100	97	93	90	87	84
41	27	Public	Public LED equ MV 80W (BaU)	Public LED equ MV 80W (VEU)				10	11	11	12	12	13	13	13	14	14	15	15	15	16	16	17
42	27	Public	Public MV 125W	Public LED equ MV 125W (VEU)				6	6	5	5	5	5	5	5	4	4	4	4	4	4	4	4
43	27	Public	Public LED equ MV 125W (BaU)					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	27	Public	Public HPS 100W	Public LED equ HPS 100W (VEU)				13	13	13	12	12	12	11	11	11	10	10	10	0	0	0	0
45	27	Public		Public LED equ HPS 100W (VEU)				0	0	0	0	0	0		0	1	10	10	10	1	1	1	1
46	27	Public	Public HPS 150W	Public LED equ HPS 150W (VEU)				394	384	374	364	354	345	336	328	320	312	304	296	289	281	274	267
46	27	Public		Public LED equ HPS 150W (VEU)				374	504	5/4	7	354	343	10	10	11	12	12	13	14	15	15	16
48	27	Public	Public HPS 250W	Public LED equ HPS 250W (VEU)				631	616	602	587	572	557	543	528	513	498	483	467	452	437	421	406
48	27	Public		Public LED equ HPS 250W (VEU)				031	010	602	587 7	5/2	557	543	528 10	11	498 12	483	13	14	15	421	17
								222	315	340	-		103	105									
50	27	Public Public	Public HPS 400W	Public LED equ HPS 400W (VEU)				222	216	210	204	198	192	185	179	172	166	159	153	146	139	126	114
51	27	PUDIIC	Public LED equ HPS 400W (BaU)	Public LED equ HPS 400W (VEU)				1	1	1	1	2	2	2	2	2	3	3	3	3	4	4	4

19. Lifetime energy savings (MWh)

		igy saving.																					
ID	Part	Sector	Baseline	Install	20166	2017a	2017b	2018a	2018b	2019a	2019b	2020a	2020b	2021a	2021b	2022a	2022b	2023a	2023b	2024a	2024b	2025a	2025b
1	34	Non-Office	Downlight CFL	Downlight LED (VEU)				19,770	17,075	14,649	12,476	10,542	8,834	7,336	6,034	4,912	3,955	3,146	2,472	1,915	1,463	1,100	814
2	34	Non-Office	Downlight halogen	Downlight LED (VEU)				17,878	15,347	13,079	11,061	9,276	7,711	6,348	5,172	4,168	3,320	2,610	2,025	1,548	1,164	861	626
3	34	Non-Office	Downlight LED (BaU)	Downlight LED (VEU)				245	256	267	278	288	299	309	320	330	341	353	364	377	390	404	418
4	34	Non-Office	Bay/shop HID	Bay/shop LED (VEU)				850,343	486,573	269,847	149,640	82,973	46,003	25,504	14,138	7,837	4,343	2,407	1,334	739	410	227	126
5	34	Non-Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)				483	565	626	676	721	763	806	849	894	942	992	1,046	1,103	1,163	1,227	1,296
6	34	Non-Office	Linear T5	Linear LED tube (VEU)				260,124	220,260	185,270	154,742	128,278	105,493	86,021	69,511	55,629	44,062	34,517	26,721	20,425	15,400	11,441	8,366
7	34	Non-Office	Linear T5	Linear LED panel (VEU)				396	418	440	464	488	514	540	568	597	627	657	654	652	650	647	645
8	34	Non-Office	Linear T8	Linear LED tube (VEU)				851,161	702,566	573,883	463,524	369,876	291,316	226,228	173,026	130,171	96,194	69,715	49,463	34,286	23,163	15,208	9,670
9	34	Non-Office	Linear T8	Linear LED panel (VEU)				1,323	1,393	1,465	1,540	1,618	1,699	1,783	1,819	1,812	1,805	1,799	1,791	1,784	1,777	1,769	1,762
10	34	Non-Office	Linear LED tube (BaU)	Linear LED tube (VEU)				698	811	910	998	1,077	1,149	1,215	1,277	1,338	1,397	1,455	1,515	1,577	1,640	1,707	1,777
11	34	Non-Office	Linear LED panel (BaU)	Linear LED panel (VEU)				510	600	682	757	828	895	960	1,024	1,088	1,153	1,220	1,289	1,361	1,437	1,518	1,603
12	34	Office	Downlight CFL	Downlight LED (VEU)				1,758	1,618	1,488	1,367	1,256	1,152	1,056	966	883	806	734	667	605	547	493	444
13	34	Office	Downlight halogen	Downlight LED (VEU)				751	663	583	511	445	386	333	285	241	203	168	138	111	87	67	49
14	34	Office	Downlight LED (BaU)	Downlight LED (VEU)				40	42	43	45	46	47	48	50	51	52	53	54	56	57	58	59
15	34	Office	Bay/shop HID	Bay/shop LED (VEU)				23,031	20,649	18,473	16,487	14,677	13,029	11,531	10,172	8,942	7,830	6,828	5,929	5,123	4,405	3,767	3,202
16	34	Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)				41	47	52	57	61	65	69	72	76	78	81	84	86	89	91	93
17	34	Office	Linear T5	Linear LED tube (VEU)				20,740	18,665	16,772	15,048	13,476	12,046	10,745	9,563	8,491	7,518	6,639	5,844	5,128	4,484	3,906	3,389
18	34	Office	Linear T5	Linear LED panel (VEU)				27	28	29	30	31	33	34	36	38	39	41	43	45	47	50	52
19	34	Office	Linear T8	Linear LED tube (VEU)				69,781	63,085	56,922	51,252	46,038	41,248	36,852	32,823	29,137	25,771	22,704	19,917	17,392	15,111	13,060	11,222
20	34	Office	Linear T8	Linear LED panel (VEU)				93	97	101	106	111	116	121	127	133	139	146	153	160	167	175	183
21	34	Office	Linear LED tube (BaU)	Linear LED tube (VEU)				111	128	144	159	172	184	196	206	216	225	234	242	250	257	265	272
22	34	Office	Linear LED panel (BaU)	Linear LED panel (VEU)				74	86	97	107	117	126	134	143	150	158	165	172	180	187	194	201
23	34	Industrial	Downlight CFL	Downlight LED (VEU)				2.153	1,732	1,376	1,079	834	635	474	348	249	174	118	78	49	29	16	8
24	34	Industrial	Downlight halogen	Downlight LED (VEU)				3,966	3,326	2,765	2,279	1.860	1,502	1,199	946	737	566	429	319	234	168	118	82
25	34	Industrial	Downlight LED (BaU)	Downlight LED (VEU)				25	26	27	29	30	31	32	33	34	35	36	37	39	40	41	43
26	34	Industrial	Bay/shop HID	Bay/shop LED (VEU)				597.795	271,788	123.557	56.165	25,528	11.602	5.273	2.396	1.089	495	225	102	46	21	10	43
27	34	Industrial	Bay/shop LED (BaU)	Bay/shop LED (VEU)				1.585	1,745	1.887	2,025	2,166	2,313	2,468	2,633	2.807	2,993	3,189	3,398	3.618	3,851	4.098	4,358
28	34	Industrial	Linear T5	Linear LED tube (VEU)				39,780	32,358	26,106	20,878	16,541	12,975	10,068	7.722	5,850	4,372	3,220	2,334	1,663	1,163	796	533
29	34	Industrial	Linear T5	Linear LED panel (VEU)				49	52,556	54	57	60	63	66	69	73	77	80	80	80	79	79	79
30	34	Industrial	Linear T8	Linear LED tube (VEU)				199,927	155,872	119,845	90.769	67,639	49,524	35,574	25,028	17,214	11,549		4,775	2,923	1.722	971	520
31	34	Industrial	Linear T8	Linear LED tube (VEU)				249	262	275	289	304	49,524 319	33,574	342	341	339	7,539 338	337	335	334	332	331
32		Industrial	Linear LED tube (BaU)													265				309			347
33	34 34			Linear LED tube (VEU)				156	176 130	193 145	208 158	221 170	233 182	244	255 204	216	276 228	286 240	297 253	266	321 281	333 296	
33		Industrial	Linear LED panel (BaU)	Linear LED panel (VEU)				114						193				688		569			313
	35	Non-building	Bay/shop HID	Bay/shop LED (VEU)				1,776	1,616	1,471	1,338	1,217	1,107	1,007	915	832	757		626		517	470	427
35	35	Non-building	Bay/shop LED (BaU)	Bay/shop LED (VEU)				8	10	12	13	15	17	19	21	23	25	27	29	32	34	37	39
36	35	Non-building	Linear T8	Linear LED tube (VEU)				2,184	2,145	2,105	2,065	2,025	1,985	1,944	1,902	1,860	1,817	1,773	1,728	1,683	1,636	1,589	1,540
37	35	Non-building		Linear LED panel (VEU)				30	31	33	35	36	38	40	42	44	46	49	50	50	49	49	49
38	35	Non-building	Linear LED tube (BaU)	Linear LED tube (VEU)				7	9	11	13	15	17	19	20	22	24	26	28	30	32	34	37
39	35		Linear LED panel (BaU)	Linear LED panel (VEU)				7	8	10	11	13	15	16	18	20	22	24	26	28	30	32	35
40	27	Public	Public MV 80W	Public LED equ MV 80W (VEU)				2,936	2,818	2,707	2,601	2,501	2,406	2,316	2,231	2,150	2,074	2,001	1,932	1,866	1,804	1,744	1,687
41	27	Public		Public LED equ MV 80W (VEU)				199	210	221	231	241	251	260	269	277	286	294	302	309	317	324	331
42	27	Public	Public MV 125W	Public LED equ MV 125W (VEU)				114	110	107	103	100	97	94	91	88	86	83	81	79	77	75	73
43	27	Public		Public LED equ MV 125W (VEU)				5	5	6	6	6	7	7	7	7	8	8	8	9	9	9	9
44	27	Public	Public HPS 100W	Public LED equ HPS 100W (VEU)				267	259	252	244	237	231	224	218	212	206	200	195	190	184	179	174
45	27	Public		Public LED equ HPS 100W (VEU)				5	6	7	7	8	9	9	10	10	11	12	12	13	13	14	14
46	27	Public	Public HPS 150W	Public LED equ HPS 150W (VEU)				7,885	7,674	7,471	7,276	7,087	6,906	6,730	6,559	6,394	6,233	6,076	5,923	5,773	5,626	5,482	5,340
47	27	Public	Public LED equ HPS 150W (BaU)	Public LED equ HPS 150W (VEU)				92	110	127	143	159	175	190	205	220	235	249	263	277	291	305	319
48	27	Public	Public HPS 250W	Public LED equ HPS 250W (VEU)				12,624	12,329	12,034	11,740	11,445	11,150	10,854	10,556	10,257	9,957	9,654	9,350	9,044	8,736	8,426	8,115
49	27	Public	Public LED equ HPS 250W (BaU)	Public LED equ HPS 250W (VEU)				79	97	114	131	148	165	182	198	215	232	249	267	284	302	321	340
50	27	Public	Public HPS 400W	Public LED equ HPS 400W (VEU)				4,446	4,326	4,204	4,081	3,957	3,831	3,704	3,575	3,446	3,315	3,183	3,051	2,918	2,770	2,517	2,286
51	27	Public	Public LED equ HPS 400W (BaU)	Public LED equ HPS 400W (VEU)				12	16	21	26	30	35	40	44	49	54	59	64	69	74	79	85

18. VEECs created

IO. VELV	es cicate																						
ID	Part	Sector	Baseline	Install	2016b	2017a	2017b	2018a	2018b	2019a	2019b	2020a	2020b	2021a	2021b	2022a	2022b	2023a	2023b	2024a	2024b	2025a	2025b
1	34	Non-Office	Downlight CFL	Downlight LED (VEU)				21,540	18,604	15,960	13,593	11,486	9,625	7,993	6,574	5,352	4,309	3,428	2,693	2,087	1,594	1,199	886
2	34	Non-Office	Downlight halogen	Downlight LED (VEU)				19,479	16,721	14,250	12,051	10,107	8,401	6,916	5,635	4,541	3,617	2,844	2,206	1,686	1,269	939	682
3	34	Non-Office	Downlight LED (BaU)	Downlight LED (VEU)				266	279	291	303	314	325	337	348	360	372	384	397	411	425	440	455
4	34	Non-Office	Bay/shop HID	Bay/shop LED (VEU)				926,470	530,133	294,005	163,036	90,401	50,122	27,787	15,404	8,538	4,732	2,623	1,453	805	446	247	137
5	34	Non-Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)				526	615	682	737	785	832	878	925	974	1,026	1,081	1,140	1,202	1,267	1,337	1,412
6	34	Non-Office	Linear T5	Linear LED tube (VEU)				283,412	239,978	201,856	168,595	139,762	114,938	93,722	75,734	60,609	48,007	37,607	29,113	22,253	16,779	12,466	9,115
7	34	Non-Office	Linear T5	Linear LED panel (VEU)				432	455	480	505	532	560	589	619	650	683	715	713	710	708	705	702
8	34	Non-Office	Linear T8	Linear LED tube (VEU)				927,361	765,463	625,260	505,021	402,989	317,396	246,481	188,516	141,824	104,805	75,956	53,891	37,356	25,237	16,570	10,536
9	34	Non-Office	Linear T8	Linear LED panel (VEU)				1,442	1,517	1,596	1,677	1,763	1,851	1,943	1,982	1,974	1,967	1,960	1,952	1,944	1,936	1,928	1,919
10	34	Non-Office	Linear LED tube (BaU)	Linear LED tube (VEU)				761	884	992	1,088	1,173	1,251	1,324	1,392	1,457	1,522	1,586	1,651	1,718	1,787	1,860	1,936
11	34	Non-Office	Linear LED panel (BaU)	Linear LED panel (VEU)				556	654	743	825	902	975	1,046	1,116	1,186	1,257	1,329	1,405	1,483	1,566	1,654	1,747
12	34	Office	Downlight CFL	Downlight LED (VEU)				1,916	1,763	1,621	1,490	1,368	1,255	1,150	1,053	962	878	799	727	659	596	538	484
13	34	Office	Downlight halogen	Downlight LED (VEU)				818	722	635	557	485	421	362	310	263	221	183	150	121	95	73	53
14	34	Office	Downlight LED (BaU)	Downlight LED (VEU)				44	45	47	48	50	51	53	54	55	57	58	59	61	62	63	64
15	34	Office	Bay/shop HID	Bay/shop LED (VEU)				25,093	22,498	20,127	17,963	15,991	14,196	12,564	11,083	9,742	8,531	7,440	6,460	5,582	4,799	4,104	3,489
16	34	Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)				45	51	57	62	67	71	75	79	82	86	88	91	94	97	99	102
17	34	Office	Linear T5	Linear LED tube (VEU)				22.597	20,336	18,274	16,395	14,683	13,125	11,707	10,420	9,251	8,191	7,233	6,367	5.587	4.885	4.256	3,693
18	34	Office	Linear T5	Linear LED panel (VEU)				29	30	31	33	34	36	37	39	41	43	45	47	49	52	54	57
19	34	Office	Linear T8	Linear LED tube (VEU)				76,028	68,733	62,018	55,840	50,159	44,940	40,151	35,762	31,746	28,078	24,737	21,700	18,949	16,464	14,229	12,226
20	34	Office	Linear T8	Linear LED panel (VEU)				101	106	110	115	121	126	132	138	145	152	159	166	174	182	191	200
21	34	Office	Linear LED tube (BaU)	Linear LED tube (VEU)				121	140	157	173	187	201	213	225	235	245	255	264	272	281	289	296
22	34	Office	Linear LED panel (BaU)	Linear LED panel (VEU)				81	94	106	117	127	137	146	155	164	172	180	188	196	203	211	219
23	34	Industrial	Downlight CFL	Downlight LED (VEU)				2.346	1.887	1,499	1,176	909	691	517	379	271	190	129	85	53	32	18	9
24	34	Industrial	Downlight halogen	Downlight LED (VEU)				4,321	3,623	3,013	2,483	2.026	1,636	1,307	1,031	803	617	467	348	255	183	129	89
25	34	Industrial	Downlight LED (BaU)	Downlight LED (VEU)				27	28	30	31	32	33	35	36	37	38	39	41	42	44	45	47
26	34	Industrial	Bay/shop HID	Bay/shop LED (VEU)				651,312	296,120	134.619	61,193	27.814	12,641	5,745	2.610	1.186	539	245	111	51	23	10	5
27	34	Industrial	Bay/shop LED (BaU)	Bay/shop LED (VEU)				1.727	1,901	2,056	2,207	2,360		2,689	2,869	3,059	3.261	3,475	3,702	3.942	4,196	4.465	4,748
28	34	Industrial	Linear T5	Linear LED tube (VEU)				43,341	35,255	28,443	22,747	18,022	14,136	10,969	8,414	6,373	4,763	3,508	2,543	1.812	1,267	868	581
29	34	Industrial	Linear T5	Linear LED panel (VEU)				53	55,255	59	62	65	68	72	76	80	84	88	2,343	87	87	86	86
30	34	Industrial	Linear T8	Linear LED tube (VEU)				217,826	169,827	130,574	98,896	73,695	53,957	38,759	27,269	18,755	12,583	8,214	5,202	3.185	1.877	1,058	566
31	34	Industrial	Linear T8	Linear LED tube (VEU)				217,826	285	300	315	73,095	348	365	372	371	370	368	367	3,185	364	362	361
32	34	Industrial	Linear LED tube (BaU)	Linear LED tube (VEU)				170	192	211	227	241	254	266	278	289	300	312	324	336	349	363	378
33	34	Industrial	Linear LED ranel (BaU)	Linear LED ranel (VEU)				124	142	158	172	185	198	210	223	235	248	261	275	290	306	323	341
34	35	Non-building	Bay/shop HID	Bay/shop LED (VEU)				1,936	1,761	1,602	1,458	1,326	1,206	1,097	997	907	825	750	682	620	563	512	465
35	35	Non-building		Bay/shop LED (VEU)				1,530	1,701	1,002		1,520	1,200	20	22	25	27	29	32		37	40	403
			Bay/shop LED (BaU)					2.379	2.337	2,294	2.250	2.207	2.163		2.072	2.026	1.979	1.932	1.883	1.833	1.782	1.731	
36	35	Non-building	Linear T8	Linear LED tube (VEU)										2,118				,	,			, .	1,678
37	35	Non-building		Linear LED panel (VEU)				32	34	36	38	40	42	44	46	48	50 26	53 29	54	54	54	54 38	53
38	35	Non-building	Linear LED tube (BaU)	Linear LED tube (VEU)				8	10	12	14	16	18	20	22	24			31	33	35		40
39	35		Linear LED panel (BaU)	Linear LED panel (VEU)				7	9	11	12	14	16	18	20	22	24	26	28	30	33	35	38
40	27	Public	Public MV 80W	Public LED equ MV 80W (VEU)				3,199	3,071	2,949	2,834	2,725	2,622	2,524	2,431	2,343	2,259	2,180	2,105	2,033	1,965	1,900	1,839
41	27	Public		Public LED equ MV 80W (VEU)				217	229	241	252	263	273	283	293	302	311	320	329	337	345	353	361
42	27	Public	Public MV 125W	Public LED equ MV 125W (VEU)				124	120	116	113	109	106	102	99	96	94	91	88	86	84	81	79
43	27	Public		Public LED equ MV 125W (VEU)				5	6	6	6	7	7	7	8	8	8	9	9	9	10	10	10
44	27	Public	Public HPS 100W	Public LED equ HPS 100W (VEU)				291	282	274	266	259	251	244	237	231	224	218	212	206	201	195	190
45	27	Public		Public LED equ HPS 100W (VEU)				6	7	7	8	9	9	10	11	11	12	13	13	14	14	15	15
46	27	Public	Public HPS 150W	Public LED equ HPS 150W (VEU)				8,591	8,361	8,140	7,927	7,722	7,524	7,332	7,147	6,966	6,791	6,620	6,453	6,290	6,130	5,972	5,818
47	27	Public		Public LED equ HPS 150W (VEU)				100	119	138	156	174	191	208	224	240	256	271	287	302	317	332	347
48	27	Public	Public HPS 250W	Public LED equ HPS 250W (VEU)				13,754	13,433	13,111	12,791	12,470	12,148	11,825	11,501	11,176	10,848	10,519	10,187	9,854	9,518	9,181	8,842
49	27	Public		Public LED equ HPS 250W (VEU)				86	105	124	143	161	180	198	216	235	253	272	291	310	330	350	370
50	27	Public	Public HPS 400W	Public LED equ HPS 400W (VEU)				4,845	4,713	4,581	4,447	4,311	4,174	4,035	3,895	3,754	3,611	3,468	3,324	3,179	3,018	2,742	2,491
51	27	Public	Public LED equ HPS 400W (BaU)	Public LED equ HPS 400W (VEU)				13	18	23	28	33	38	43	48	53	59	64	69	75	80	86	92

17. VEU uptake (fixtures)

ID	Part	Sector	Baseline	Install	2016b	2017a	2017b	2018a	2018b	2019a	2019b	2020a	2020b	2021a	2021b	2022a	2022b	2023a	2023b	2024a	2024b	2025a	2025b
1	34	Non-Office	Downlight CFL	Downlight LED (VEU)				19,625	16,829	14,336	12,125	10,177	8,472	6,990	5,713	4,622	3,699	2,925	2,285	1,760	1,337	1,000	736
2	34	Non-Office	Downlight halogen	Downlight LED (VEU)				17,747	15,125	12,800	10,750	8,955	7,395	6,049	4,897	3,922	3,105	2,427	1,871	1,422	1,064	783	566
3	34	Non-Office	Downlight LED (BaU)	Downlight LED (VEU)				950	967	982	996	1,008	1,020	1,032	1,044	1,056	1,069	1,083	1,098	1,115	1,133	1,153	1,174
4	34	Non-Office	Bay/shop HID	Bay/shop LED (VEU)				109,272	62,226	34,347	18,959	10,465	5,776	3,188	1,760	971	536	296	163	90	50	27	15
5	34	Non-Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)				184	213	232	248	261	272	284	296	308	321	334	348	363	379	396	414
6	34	Non-Office	Linear T5	Linear LED tube (VEU)				172,228	144,856	121,046	100,451	82,748	67,632	54,816	44,033	35,035	27,593	21,496	16,550	12,583	9,438	6,976	5,075
7	34	Non-Office	Linear T5	Linear LED panel (VEU)				131	137	144	150	157	165	172	180	188	196	204	203	201	199	197	196
8	34	Non-Office	Linear T8	Linear LED tube (VEU)				512,641	420,563	341,480	274,198	217,546	170,378	131,583	100,096	74,906	55,067	39,707	28,032	19,336	13,001	8,496	5,377
9	34	Non-Office	Linear T8	Linear LED panel (VEU)				399	417	436	455	476	497	519	526	521	517	512	508	503	499	494	490
10	34	Non-Office	Linear LED tube (BaU)	Linear LED tube (VEU)				1,439	1,637	1,801	1,937	2,051	2,148	2,232	2,307	2,377	2,442	2,506	2,570	2,636	2,704	2,775	2,851
11	34	Non-Office	Linear LED panel (BaU)	Linear LED panel (VEU)				526	605	674	734	788	837	882	925	967	1,008	1,050	1,093	1,138	1,185	1,234	1,286
12	34	Office	Downlight CFL	Downlight LED (VEU)				2,909	2,658	2,427	2,215	2,020	1,841	1,677	1,525	1,385	1,256	1,137	1,027	926	833	748	669
13	34	Office	Downlight halogen	Downlight LED (VEU)				1,242	1,089	951	828	717	617	528	449	379	316	261	212	170	133	101	74
14	34	Office	Downlight LED (BaU)	Downlight LED (VEU)				260	262	264	266	267	269	270	271	271	272	273	273	274	275	276	277
15	34	Office	Bay/shop HID	Bay/shop LED (VEU)				7,399	6,602	5,878	5,222	4,628	4,090	3,604	3,166	2,771	2,416	2,099	1,815	1,562	1,338	1,140	966
16	34	Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)				39	44	48	52	56	58	61	63	65	67	68	70	71	72	73	74
17	34	Office	Linear T5	Linear LED tube (VEU)				22,886	20,458	18,264	16,280	14,489	12,871	11,412	10,097	8,912	7,847	6,890	6,033	5,265	4,580	3,969	3,427
18	34	Office	Linear T5	Linear LED panel (VEU)				15	15	16	16	17	18	18	19	20	21	21	22	23	24	25	26
19	34	Office	Linear T8	Linear LED tube (VEU)				70,046	62,939	56,451	50,530	45,129	40,207	35,724	31,647	27,945	24,588	21,552	18,813	16,347	14,136	12,159	10,400
20	34	Office	Linear T8	Linear LED panel (VEU)				47	48	50	52	54	57	59	61	64	66	69	72	75	78	82	85
21	34	Office	Linear LED tube (BaU)	Linear LED tube (VEU)				382	432	475	513	545	574	599	620	639	656	671	684	696	707	718	727
22	34	Office	Linear LED panel (BaU)	Linear LED panel (VEU)				127	145	160	173	185	196	206	215	223	230	237	244	250	256	263	269
23	34	Industrial	Downlight CFL	Downlight LED (VEU)				2,138	1,707	1,347	1,049	805	609	452	329	234	163	110	72	45	27	15	7
24	34	Industrial	Downlight halogen	Downlight LED (VEU)				3,937	3,278	2,706	2,215	1,795	1,440	1,143	896	694	530	399	295	215	153	107	74
25	34	Industrial	Downlight LED (BaU)	Downlight LED (VEU)				97	99	101	102	104	105	106	107	109	110	111	113	114	116	118	120
26	34	Industrial	Bay/shop HID	Bay/shop LED (VEU)				38,409	17,379	7,863	3,558	1,610	728	330	149	67	31	14	6	3	1	1	0
27	34	Industrial	Bay/shop LED (BaU)	Bay/shop LED (VEU)				303	328	350	371	391	413	435	459	483	509	537	566	596	628	661	696
28	34	Industrial	Linear T5	Linear LED tube (VEU)				26,338	21,281	17,056	13,553	10,670	8,318	6,416	4,892	3,684	2,738	2,005	1,446	1,024	713	486	324
29	34	Industrial	Linear T5	Linear LED panel (VEU)				16	17	18	18	19	20	21	22	23	24	25	25	25	24	24	24
30	34	Industrial	Linear T8	Linear LED tube (VEU)				120,413	93,307	71,312	53,695	39,783	28,964	20,691	14,479	9,906	6,611	4,294	2,706	1,649	967	542	289
31	34	Industrial	Linear T8	Linear LED panel (VEU)				75	78	82	86	89	93	97	99	98	97	96	95	95	94	93	92
32	34	Industrial	Linear LED tube (BaU)	Linear LED tube (VEU)				321	355	382	404	421	436	449	461	471	482	493	504	516	528	542	556
33	34	Industrial	Linear LED panel (BaU)	Linear LED panel (VEU)				117	131	143	153	162	170	177	185	192	199	207	214	223	231	241	251
34	35	Non-building	Bay/shop HID	Bay/shop LED (VEU)				127	115	104	94	85	77	70	63	57	52	47	43	39	35	32	29
35	35	Non-building	Bay/shop LED (BaU)	Bay/shop LED (VEU)				2	2	2	3	3	3	4	4	4	5	5	5	6	6	7	7
36	35	Non-building	Linear T8	Linear LED tube (VEU)				1,461	1,426	1,392	1,358	1,324	1,290	1,256	1,223	1,189	1,156	1,122	1,088	1,054	1,020	986	952
37	35	Non-building	Linear T8	Linear LED panel (VEU)				10	10	11	11	12	12	13	14	14	15	15	16	16	15	15	15
38	35	Non-building	Linear LED tube (BaU)	Linear LED tube (VEU)				16	20	24	28	31	35	38	41	44	47	50	53	56	59	62	65
39	35	Non-building	Linear LED panel (BaU)	Linear LED panel (VEU)				8	9	11	12	14	15	17	18	20	21	23	24	26	28	29	31
40	27	Public	Public MV 80W	Public LED equ MV 80W (VEU)				855	818	782	749	718	688	660	634	609	585	563	542	521	502	484	467
41	27	Public		Public LED equ MV 80W (VEU)				156	163	170	176	182	187	193	197	202	206	210	214	218	222	225	228
42	27	Public	Public MV 125W	Public LED equ MV 125W (VEU)				28	27	26	25	24	24	23	22	21	21	20	19	19	18	17	17
43	27	Public	Public LED equ MV 125W (BaU)	Public LED equ MV 125W (VEU)				4	4	4	4	4	5	5	5	5	5	5	5	6	6	6	6
44	27	Public	Public HPS 100W	Public LED equ HPS 100W (VEU)				51	49	47	46	44	43	42	40	39	38	37	36	35	34	33	32
45	27	Public	Public LED equ HPS 100W (BaU)	Public LED equ HPS 100W (VEU)				3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
46	27	Public	Public HPS 150W	Public LED equ HPS 150W (VEU)				1,307	1,267	1,229	1,192	1,156	1,123	1,090	1,058	1,028	999	970	943	916	889	864	839
47	27	Public	Public LED equ HPS 150W (BaU)	Public LED equ HPS 150W (VEU)				42	50	57	63	70	76	82	87	93	98	103	108	113	117	122	127
48	27	Public	Public HPS 250W	Public LED equ HPS 250W (VEU)				1,308	1,272	1,237	1,202	1,167	1,132	1,098	1,064	1,030	996	962	929	895	862	829	795
49	27	Public	Public LED equ HPS 250W (BaU)	Public LED equ HPS 250W (VEU)				23	28	32	37	41	45	49	53	57	61	65	69	73	77	81	85
50	27	Public	Public HPS 400W	Public LED equ HPS 400W (VEU)				289	280	271	262	253	244	235	226	217	208	199	190	181	172	155	141
51	27	Public	Public LED equ HPS 400W (BaU)	Public LED equ HPS 400W (VEU)				2	3	4	5	5	6	7	8	8	9	10	10	11	12	13	13

16. Fixture stock - initial estimates

Bit Part Section Descript Nation Descr		TE SLOCK	iiiitiai est							
2	ID	Part	Sector	(Baseline) Fixture	(Upgrade) Fixture	Stock 2016	Split	BaU per 6 mnths (%)		Stock 2017
33 34 Non-Office Covenight LED (VEU) Suphispa (10 PVEU) Suph	1								-23,827	
3	2	34	Non-Office	Downlight halogen	Downlight LED (VEU)	187,830	50%		-53,468	134,362
3	3	34	Non-Office	Downlight LED (BaU)	Downlight LED (VEU)	818.244		5.0%	18.012	836,256
4 34 Non-Office Say/hop (1D Bull) Bay/hop (1D Pub) 335,596	3a									
S					Pay/chon LED (VELI)					
Section										
6					Bay/shop LED (VEU)			5.0%		
Fig. Section Computer Com										
B	6	34	Non-Office	Linear T5	Linear LED tube (VEU)	1,334,156	30%		-104,349	1,229,807
9 34 Non-Office (Linear LED panel (REAL)) Linear (ELD panel (REAL)) Linear (ELD panel (REAL)) 1.055,333 75% 5.0% 175,995 1,231,228 1113 34 Non-Office (Linear LED panel (REAL)) Linear (ELD panel (REAL)) 1.055,333 75% 5.0% 55,665 410,175 734,715 113 34 Non-Office (Linear LED panel (REAL)) Linear (ELD panel (REAL)) 1.055,333 75% 5.0% 55,665 410,175 734,715 113 34 Non-Office (Linear (ELD panel (REAL)) 1.056,065 2.0% 5.0% 55,665 140,175 734,715 113 34 Non-Office (Linear (ELD panel (REAL)) 1.056,065 2.0% 5.0% 55,050 12,125,000 1	7	34	Non-Office	Linear T5	Linear LED panel (VEU)					
9 34 Non-Office Linear IZD Linear (EX) panel (PAU) 10 34 Non-Office Linear (EX) panel (PAU) 111 34 Non-Office Linear (EX) panel (PAU) 112 34 Non-Office Linear (EX) panel (PAU) 113 34 Non-Office Linear (EX) panel (PAU) 114 35 Non-Office Linear (EX) panel (PAU) 115 35 Non-Office Linear (EX) panel (PAU) 116 36 Non-Office Linear (EX) panel (PAU) 117 34 Non-Office Linear (EX) panel (PAU) 118 34 Non-Office Committed (PAU) 119 35 Non-Office Committed (PAU) 119 36 Non-Office Committed (PAU) 119 37 Non-Office Committed (PAU) 119 37 Non-Office Committed (PAU) 119 37 Non-Office Committed (PAU) 119 38 Non-Office Committed	8	34	Non-Office	Linear T8	Linear LED tube (VEU)	3.359.037	70%		-243,480	3.115.557
10	q	3.4	Non-Office	Linear TR	Linear LED nanel (VELI)	.,,			.,	., .,
13						1.055.133	750/	E 00/	175 005	1 221 120
131 34 Non-Office Lines LED sube (VEU)										
110					Linear LED panel (VEU)			5.0%		
13 34 Office										
13 34 Office Downlight LED(REJ) 33,92E 45% 5.0% 4,222 225,418										
144 34 Office Downlight LED(RM) Downlight LED(VEU) 149,948 20,554 179,502 175,503 175,	12	34	Office	Downlight CFL	Downlight LED (VEU)	50,656	55%		-8,749	41,907
144 34 Office Downlight LED(RM) Downlight LED(VEU) 149,948 20,554 179,502 175,503 175,	13	34	Office	Downlight halogen	Downlight LFD (VFU)	33.928	45%		-16.034	17.894
14.4 34 Office Downlight ED (PEU) Sey/shop LED (PEU) Sey/sho								5.0%		
15 34 Office					DOWNINGHE EED (VEO)			3.076		
16										
16										
17					Bay/shop LED (VEU)			5.0%		
18	16a	34	Office	Bay/shop LED (VEU)		39,377			5,138	44,515
18	17	34	Office	Linear T5	Linear LED tube (VEU)	360.644	30%		-38,760	321.884
19 34 Office	18	34	Office		Linear LED panel (VFII)					
20						09//117	70%		-90 440	902 076
21 34 Office Linear LED tube (BaU) Linear LED tube (PEU) 285,219 75% 5.0% 50,440 335,659						304,417	7076		-30,440	693,970
222 34 Office Linear LED panel (RM) Unear LED panel (VEU) 95,073 25% 5.0% 15,813 111,886										
222b 34 Office Linear LED Jushe VEU 95,565 29% 432 2328 232 34 Industrial Downlight CEL Downlight LED (VEU) 17,241 50% 4.293 12,947 255 34 Industrial Downlight LED (VEU) 00,000 46,057 50% 3.210 32,947 255 34 Industrial Downlight LED (VEU) 00,000 32,000 32,110 23,847 25,947 25 34 Industrial Downlight LED (VEU) 00,000 23,110 23,847 25,947							7			
22b 34 Office Linear LED panel (VEU) 1,950 2% 4,293 12,982	22	34	Office	Linear LED panel (BaU)	Linear LED panel (VEU)		25%	5.0%	16,813	111,886
22b 34 Office Linear LED panel (VEU) 1,950 2% 4,293 12,982	22a	34	Office	Linear LED tube (VEU)		95,565	98%		61,516	157,080
23	22b	34	Office	Linear LED panel (VEU)		1.950	2%		432	
244 34	23	3.4	Industrial		Downlight LED (VELI)	17 241	50%		.4 293	
255 34 Industrial Downlight LED (REU)										
25a 34							3076			
26 34 Industrial Bay/shop EID (REU) 318,762	25		Industrial		Downlight LED (VEU)			5.0%		
277 34 Industrial Bay/shop LED (RUU) 101,629 5.0% 16,938 118,567 244,624 381,021 278 34 Industrial Linear TS Linear LED Lube (RUI) 215,821 20% 65,365 150,456 280,334 Industrial Linear TS Linear LED Lube (RUI) 215,821 20% 65,365 150,456 280,334 Industrial Linear TB Linear LED Lube (RUI) 215,821 20% 65,365 150,456 280,334 Industrial Linear TB Linear LED Lube (RUI) 244,600 80% 2261,460 585,445 311 344 Industrial Linear TB Linear LED Lube (RUI) 344,897 75% 5.0% 39,852 274,839 333 344 Industrial Linear LED Lube (RUI) Linear LED Lube (RUI) 234,987 75% 5.0% 39,852 274,839 333 344 Industrial Linear LED Lube (RUI) Linear LED Lube (RUI) RUIN (RUIN)	25a		Industrial	Downlight LED (VEU)						74,932
278 34 Industrial 1 189/shop LED (VEU) 135,509 244,624 380,129	26	34	Industrial	Bay/shop HID	Bay/shop LED (VEU)	338,762			-261,562	77,199
28	27	34	Industrial	Bay/shop LED (BaU)	Bay/shop LED (VEU)	101,629		5.0%	16,938	118,567
28	27a				.,,,	135,505				
29					Linear LED tube (VELI)		209/		65.365	
30						213,021	20%		-03,303	130,436
31 34										
322 34 Industrial Linear LED tube (Ball) Linear LED tube (PEU) 234,987 75% 5.0% 39,852 277,839 33 34 Industrial Linear LED panel (Ball) Linear LED panel (VEU) 78,329 25% 5.0% 31,284 91,613 33 34 Industrial Linear LED panel (VEU) 368,561 89% 270,193 638,754 33 34 Industrial Linear LED panel (VEU) 7,522 2% 3,496 11,018 34 35 Mon-building Bay/shop LED (REU) 89/shop LED (VEU) 3,000 5.0% 150 2,850 35 35 Mon-building Bay/shop LED (REU) 900 5.0% 150 1,050 368,561 39% 35 Mon-building Bay/shop LED (VEU) 900 5.0% 150 1,050 368,561 39% 35 Mon-building Bay/shop LED (VEU) 900 5.0% 150 1,050 368,561 39% 35 Mon-building Linear LED LINEAR LED (LINEAR LED						846,905	80%		-261,460	585,445
33	31	34	Industrial	Linear T8	Linear LED panel (VEU)					
33a	32	34	Industrial	Linear LED tube (BaU)	Linear LED tube (VEU)	234,987	75%	5.0%	39,852	274,839
33a	33	34	Industrial	Linear LED panel (Ball)	Linear LED nanel (VELI)	78.329	25%	5.0%	13.284	91.613
33b					annear ann parrer (120)					
34										
35					_ //		270			
358						3,000				
35	35	35	Non-building		Bay/shop LED (VEU)	900		5.0%	150	1,050
377 35 Non-building Linear IED tube (Bul) Linear LED panel (VEU)	35a	35	Non-building	Bay/shop LED (VEU)		0			0	0
377 35 Non-building Linear IED tube (Bul) Linear LED panel (VEU)	36	35	Non-building	Linear T8	Linear LED tube (VEU)	100.000			-5,000	95,000
38 35 Non-building Linear LED Lube (Ball) Linear LED Lube (Ball) Linear LED Lube (Ball) Linear LED Lube (Ball) Linear LED Lube (PEU) 1,000 25% 5,0% 1,250 6,505 39a 35 Non-building Linear LED Lube (VEU) 0 88% 0 0 0 40 27 Public Public LED panel (REU) Public LED qual MY 80W Public LED qual MY 80W 136,409 5,0% 6,820 129,589 41 27 Public Public LED qual MY 80W (Ball) Public LED qual MY 80W 136,000 5,0% 6,820 129,589 41 27 Public Public LED qual MY 80W (Ball) Public LED qual MY 80W 136,000 5,0% 6,820 136,000 41 27 Public Public LED qual MY 80W (Ball) Public LED qual MY 125W 0 0 0 0 42 27 Public Public LED qual MY 80W (REI) Public LED qual MY 125W Public	37	35		Linear T8	Linear LED panel (VEU)				.,	,
39 35 Non-building Unear LED panel (VEU) 5,000 25% 5,0% 1,250 6,250						10.000	75%	5.0%	3 750	13 750
39a 35 Non-building Linear LED Lube (VEU) 0 98% 0 0 0						10,000				
1985 35 Non-building Linear LED panel (VEU) 0 2% 0 0 0					Linear LED panel (VEU)	5,000		5.0%	1,250	
Add						0			0	
A						0	2%		0	
41					Public LED equ MV 80W					
Alia 27	41	27	Public	Public LED equ MV 80W (BaU)	Public LED equ MV 80W	130,000		5.0%	6.820	136,820
A22 27						0			0	
A33 27					Public LED on M0/1259	4.006			205	
A3a 27 Public Public LED equ M 125W (VEU) Public LED equ HPS 1000 5.572 -2.79 5.293								5.00/		
A44 27				Public LED equ MV 125W (BaU)	Public LED equ MV 125V	3,000		5.0%	205	
45 27						0			0	
A55 27				Public HPS 100W	Public LED equ HPS 100	5,572			-279	
45a 27 Public Public (LED equ HP5.100W (VEU) 0 0 0 0 0 0 0 0 0	45	27	Public	Public LED equ HPS 100W (BaU)		2,000		5.0%	279	2,279
46 27						,,,,,			0	
477 27 Public Public LED equ HPS 150W (BaU) Public LED equ HPS 150 30,000 5,0% 6,876 36,876 47a 27 Public Public LED equ HPS 150W (PU) 0 3,877 7,3661 3,877 73,661 3,877 18,877 49 27 Public Public LED equ HPS 250W (BU) Public LED equ HPS 250W (BU) 0					Dublic LED on LUCCATO	127 544			6.076	-
47a 27 Public Public LED equ HPS 150W (VEU) 0 0 0 0 48 27 Public Public LED equ HPS 250W Public LED equ HPS 250W 3,877 73,661 49 27 Public Public LED equ HPS 250W (BAU) 0 5.0% 3,877 18,877 49a 27 Public Public LED equ HPS 250W (PEU) 0 0 0 0 0 50 27 Public Public LED equ HPS 400W Public LED equ HPS 400T 12,473 -624 11,849 51 27 Public Public LED equ HPS 400W (BAU) Public LED equ HPS 400T 1,000 5.0% 624 1,624								5.00/		
48 27 Public Public LED equ HPS 250W Public LED equ HPS 250 77,338 3,877 73,661 49 27 Public Public LED equ HPS 250W (BAU) Public LED equ HPS 250W 15,000 5,0% 3,877 18,877 49a 27 Public Public LED equ HPS 250W (PEU) 0 0 0 0 0 50 27 Public Public LED equ HPS 400W 12,473 424 11,894 51 27 Public Public LED equ HPS 400W (BAU) Public LED equ HPS 400W 1,000 5.0% 624 1,624					Public LED equ HPS 150	30,000		5.0%	6,876	
49 27 Public Public LED equ HPS 250W (BaU) Public LED equ HPS 250W (BaU) 15,000 5,0% 3,877 18,877 49a 27 Public Public LED equ HPS 250W (YEU) 0 0 0 0 0 0 0 0 0 1,000 1 0 0 0 0 0 0 1 0 0 0 0 0 0 1 0 0 0 0 0 0 0 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td>0</td> <td></td> <td></td> <td>0</td> <td></td>						0			0	
49a 27 Public Public (ED equ HPS250W (VEU) 0 0 0 0 50 27 Public Public (HPS400W) Public LED equ HPS400 12,473 -624 11,849 51 27 Public Public LED equ HPS400W 1,000 5.0% 624 1,624						77,538				
49a 27 Public Public (ED equ HPS250W (VEU) 0 0 0 0 50 27 Public Public (HPS400W) Public LED equ HPS400 12,473 -624 11,849 51 27 Public Public LED equ HPS400W 1,000 5.0% 624 1,624	49	27	Public	Public LED equ HPS 250W (BaU)	Public LED equ HPS 250	15,000		5.0%	3,877	18,877
50 27 Public Public HPS 400W Public LED equ HPS 4000 12,473 -624 11,849 51 27 Public Public LED equ HPS 400W (BaU) Public LED equ HPS 400 1,000 5.0% 624 1,624						0			n	
51 27 Public Public LED equ HPS 400W (BaU) Public LED equ HPS 400 1,000 5.0% 624 1,624					Public LED on HPS 400	12,472			.634	
								E 00/		
51a ZI PUDIIC PUDIIC LED EQU HPS 400W (VEU) U 0 0					r ubiic LED equ HP5 400	1,000		5.0%	624	
	51a	27	Public	Public LED equ HPS 400W (VEU)		0			0	0

Stoc

Stock																
2017b	2018a	2018b	2019a	2019b	2020a	2020b	2021a	2021b	2022a	2022b	2023a	2023b	2024a	2024b	2025a	2025b
148,579	121,880	99,266	80,233	64,324	51,123	40,258	31,390	24,219	18,478	13,929	10,367	7,611	5,506	3,922	2,747	1,890
134,362 836,256	109,541 849,453	88,631 860.057	71,134 868.470	56,599 875.043	44,621 880.081	34,833 883.848	26,907 886,571	20,552 888.442	15,511 889.624	11,556 890,254	8,492 890,445	6,149 890.289	4,383 889.862	3,071 889,224	2,113 888.421	1,426 887.489
566,671	604,992	637,913	666,030	689,901	710,042	726,929	740,999	752,654	762,255	770,128	776,563	781,818	786,115	789,650	792,586	795,061
279,587	156,335	86,293	47,631	26,291	14,512	8,010	4,421	2,441	1,347	744	410	227	125	69	38	21
117,566	131,361	138,966	143,048	145,182	146,236	146,689	146,805	146,731	146,545	146,292	145,995	145,667	145,315	144,942	144,549	144,137
173,883	283,340	345,778	380,357	399,564	410,289	416,337	419,810	421,865	423,144	424,001	424,631	425,143	425,596	426,025	426,449	426,878
1,205,211	969,106	773,840	613,386	482,435	376,331	291,017	222,972	169,168	127,012	94,303	69,187	50,116	35,806	25,208	17,465	11,894
24,596 3.053.246	24,465 2.391,559	24,328 1.853.373	24,184 1.419.941	24,033 1.074.576	23,876 802.535	23,711 590.897	23,539 428,447	23,359 305.551	23,171 214.030	22,975 147.026	22,771 98.872	22,568 64,959	22,367 41.595	22,168	21,971 15.601	21,775 9.067
62.311	61.913	61,496	61,060	60,605	60,129	590,897	59,113	58,587	58,066	57,549	57,037	56,529	56,026	25,885 55,528	55,033	54,544
1,231,128	1,389,381	1,513,769	1,610,489	1.684.802	1.741.139	1,783,199	1,814,039	1,836,160	1,851,585	1,861,932	1,868,475	1,872,207	1,873,887	1,874,086	1,873,226	1,871,615
410,376	463,081	504,484	536,650	561,332	580,007	593,906	604,048	611,265	616,232	619,487	621,453	622,461	622,761	622,544	621,949	621,076
734,715	1,421,023	1,988,080	2,452,406	2,828,992	3,131,337	3,371,494	3,560,124	3,706,561	3,818,879	3,903,982	3,967,691	4,014,843	4,049,398	4,074,540	4,092,787	4,106,091
21,885	22,940	24,099	25,353	26,693	28,114	29,613	31,186	32,817	34,493	36,215	37,982	39,785	41,627	43,510	45,435	47,406
41,907	37,354	33,248	29,548	26,217	23,220	20,526	18,107	15,938	13,995	12,257	10,706	9,323	8,093	7,002	6,036	5,183
17,894 225,414	15,306 228,144	13,033 230,515	11,040 232,564	9,299 234,328	7,783 235,836	6,469 237,118	5,333 238,198	4,356 239,099	3,521 239,843	2,811 240,446	2,211 240,927	1,708 241,299	1,291 241,577	946 241,771	667 241,893	442 241,951
170,502	174,913	178,922	182,565	185,873	188,878	191,605	194,079	196,324	198,358	200,202	201,873	203,386	204,756	205,998	207,122	208,141
88,381	76,563	66,133	56,948	48,879	41,807	35,627	30,241	25,564	21,515	18,023	15,023	12,456	10,271	8,419	6,859	5,550
34,455	38,835	42,619	45,877	48,672	51,060	53,092	54,813	56,262	57,475	58,484	59,317	59,998	60,550	60,991	61,339	61,607
44,515	51,953	58,599	64,526	69,800	74,483	78,632	82,297	85,525	88,361	90,844	93,012	94,896	96,530	97,940	99,154	100,194
315,446	274,686	238,643	206,824	178,787	154,131	132,495	113,553	97,010	82,600	70,083	59,243	49,884	41,832	34,929	29,033	24,018
6,438 876,097	6,423 764,346	6,408 665,041	6,392 576,961	6,376 498,999	6,359 430,147	6,341 369,491	6,323	6,304 269,509	6,284	6,264 193,251	6,242 162,482	6,220 135,909	6,197 113.059	6,173 93,502	6,147 76,848	6,121 62,742
17,880	17,833	17,785	17,734	17,682	17,628	17,571	316,197 17,512	17,451	228,736 17,387	17,321	17,252	17,180	17,105	17,027	16,945	16,860
335,659	379,960	418,493	451,906	480,785	505,657	526,993	545,219	560,714	573,819	584,838	594,043	601,673	607,944	613,045	617,144	620,387
111,886	126,653	139,497	150,633	160,257	168,544	175,651	181,720	186,878	191,236	194,898	197,953	200,480	202,553	204,232	205,575	206,630
157,080	250,395	334,224	409,413	476,736	536,900	590,551	638,286	680,651	718,147	751,239	780,353	805,882	828,190	847,613	864,459	879,013
2,382	2,571	2,779	3,005	3,247	3,503	3,774	4,056	4,351	4,657	4,974	5,302	5,640	5,988	6,347	6,717	7,097
12,947	9,890	7,461	5,553 11,723	4,072 9.077	2,938	2,082 5,265	1,446 3,939	983 2,908	651 2,117	419 1.518	261 1,071	155 743	88 506	46 337	22 220	9 140
85,034	86,777	88.123	89,145	89,906	90.460	90.850	91,111	91.273	91.359	91.388	91.373	91.327	91.258	91.171	91.072	90.964
74.932	81.104	86.187	90.341	93,706	96,410	98,564	100,265	101.597	102.634	103.437	104,056	104.536	104.910	105,206	105,447	105.648
77,199	34,930	15,805	7,151	3,236	1,464	662	300	136	61	28	13	6	3	1	1	0
118,567	122,124	123,542	123,982	123,969	123,739	123,399	122,998	122,554	122,078	121,571	121,036	120,471	119,875	119,248	118,586	117,890
380,129	418,841	436,548	444,762	448,691	450,692	451,833	452,598	453,206	453,756	454,296	454,847	455,418	456,017	456,646	457,308	458,005
147,447	113,897	87,233	66,207	49,768	37,028	27,248	19,817	14,231	10,081	7,037	4,835	3,264	2,163	1,404	891	552
3,009 573,736	2,993 424,476	2,976 309,634	2,959 222,448	2,940 157,207	2,921 109,145	2,901 74,334	2,880 49,579	2,858 32,325	2,835 20,557	2,811 12,720	2,786 7,636	2,761 4,431	2,736 2,474	2,712 1,322	2,688 671	2,664 319
11.709	11,634	11,556	11,474	11.388	11,299	11,205	11,108	11,009	10,911	10,814	10,718	10,622	10,528	10,434	10,341	10,249
274,839	301,562	321,396	335,896	346,317	353,657	358,702	362,063	364,204	365,479	366,146	366,394	366,357	366,130	365,776	365,336	364,839
91,613	100,511	107,109	111,927	115,382	117,807	119,464	120,556	121,239	121,629	121,813	121,854	121,795	121,669	121,495	121,288	121,057
638,754	785,826	900,769	989,520	1,057,171	1,108,046	1,145,764	1,173,320	1,193,151	1,207,212	1,217,043	1,223,835	1,228,491	1,231,680	1,233,887	1,235,457	1,236,626
11,018	11,226	11,452	11,695	11,952	12,223	12,506	12,802	13,108	13,421	13,741	14,068	14,403	14,745	15,094	15,452	15,819
2,850 1,050	2,581 1,191	2,337 1,318	2,116 1,432	1,916 1.535	1,735 1,628	1,571 1,711	1,423 1,786	1,288 1,853	1,166 1,914	1,056 1,967	956 2,015	866 2.057	784 2,095	710 2,128	643 2.157	582 2,182
1,030	1,131	246	352	449	537	618	691	758	820	877	929	977	1,021	1,062	1,100	1,136
93,100	86,984	81,208	75,756	70,611	65,756	61,179	56,864	52,798	48,969	45,365	41,975	38,788	35,794	32,984	30,349	27,880
1,900	1,890	1,880	1,869	1,857	1,846	1,833	1,820	1,807	1,793	1,778	1,763	1,747	1,731	1,716	1,701	1,686
13,750	17,225	20,467	23,489	26,302	28,919	31,350	33,607	35,698	37,634	39,423	41,074	42,595	43,993	45,276	46,451	47,524
6,250	7,406	8,484	9,489	10,423	11,292	12,099	12,847	13,540	14,180	14,771	15,315	15,816	16,275	16,695	17,078	17,426
0	1,477	2,924	4,339 59	5,724 82	7,079 108	8,403 136	9,697 165	10,961 197	12,194 231	13,397 266	14,569 304	15,711 344	16,821 386	17,900 429	18,949 473	19,966 520
129,589	122,254	115,324	108,775	102,587	96,740	91,215	85,994	81,061	76,399	71,994	67,831	63,898	60,182	56,670	53,352	50,217
136,820	143,143	149,093	154,689	159,951	164,899	169,548	173,917	178,019	181,870	185,484	188,873	192,050	195,027	197,814	200,423	202,862
0	1,012	1,993	2,945	3,871	4,770	5,646	6,498	7,330	8,140	8,932	9,705	10,461	11,200	11,924	12,634	13,329
3,891	3,668	3,457	3,258	3,070	2,892	2,724	2,565	2,415	2,273	2,139	2,012	1,892	1,779	1,672	1,571	1,475
3,205	3,396 32	3,575 63	3,744 94	3,903 123	4,052	4,192	4,323	4,447	4,562	4,671	4,772	4,867 336	4,957	5,040	5,118 407	5,190
5,293	4,978	4,680	4,399	4,133	152 3,882	180 3,645	208 3,421	235 3,210	261 3,010	287 2,821	312 2,643	2,476	361 2,317	384 2,168	2,027	430 1,894
2,279	2,541	2,787	3,017	3,234	3,437	3,627	3,805	3,971	4,127	4,273	4,409	4,536	4,654	4,764	4,866	4,962
0	53	105	156	205	253	300	346	391	435	478	520	561	601	641	679	717
130,635	122,797	115,390	108,392	101,780	95,535	89,636	84,064	78,802	73,834	69,144	64,716	60,538	56,595	52,876	49,368	46,061
36,876	43,365	49,456	55,168	60,524	65,544	70,244	74,644	78,760	82,607	86,201	89,555	92,683	95,597	98,309	100,831	103,173
0	1,349	2,666	3,951	5,206	6,433	7,631	8,803	9,949	11,070	12,167	13,240	14,291	15,319	16,326	17,312	18,278
73,661 18,877	68,670 22,537	63,964 25,943	59,529 29,108	55,351 32,048	51,417 34.774	47,714 37,300	44,230 39,636	40,955 41,794	37,877 43,785	34,987 45,617	32,276 47,301	29,733 48.846	27,351 50.259	25,122 51,550	23,037 52,725	21,090 53,792
10,6//	1,331	25,943	3,901	5.139	6.347	7,525	8,672	9,789	10,876	11,934	12,961	13,959	14,927	15,866	16,776	17,656
11,849	10,968	10,139	9,361	8,630	7,945	7,323	6,704	6,142	5,618	5,129	4,673	4,249	3,855	3,491	3,161	2,862
1,624	2,214	2,759	3,263	3,726	4,152	4,543	4,902	5,230	5,528	5,800	6,047	6,270	6,472	6,653	6,815	6,960
0	291	575	850	1,117	1,375	1,626	1,868	2,101	2,327	2,544	2,753	2,953	3,146	3,329	3,497	3,651

15. VEU uptake as % previous year's stock (apply uptake curve + electricity price effect)

-9	VEO aptake as 70 previous year 3 stock (apply aptake car						ce erree.	_															
ID	Part	Sector	Baseline	Install	2016b	2017a	2017b	2018a	2018b	2019a	2019b	2020a	2020b	2021a	2021b	2022a	2022b	2023a	2023b	2024a	2024b	2025a	2025b
1	34	Non-Office	Downlight CFL	Downlight LED (VEU)	16%	17%	17%	13%	14%	14%	15%	16%	17%	17%	18%	19%	20%	21%	22%	23%	24%	25%	27%
2	34	Non-Office	Downlight halogen	Downlight LED (VEU)	16%	17%	17%	13%	14%	14%	15%	16%	17%	17%	18%	19%	20%	21%	22%	23%	24%	25%	27%
3	34	Non-Office	Downlight LED (BaU)	Downlight LED (VEU)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
4	34	Non-Office	Bay/shop HID	Bay/shop LED (VEU)	40%	40%	40%	39%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%
5	34	Non-Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
6	34	Non-Office	Linear T5	Linear LED tube (VEU)	17%	18%	19%	14%	15%	16%	16%	17%	18%	19%	20%	21%	22%	23%	24%	25%	26%	28%	29%
7	34	Non-Office	Linear T5	Linear LED panel (VEU)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
8	34	Non-Office	Linear T8	Linear LED tube (VEU)	21%	22%	23%	17%	18%	18%	19%	20%	21%	22%	23%	25%	26%	27%	28%	30%	31%	33%	34%
9	34	Non-Office	Linear T8	Linear LED panel (VEU)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
10	34	Non-Office	Linear LED tube (BaU)	Linear LED tube (VEU)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11	34	Non-Office	Linear LED panel (BaU)	Linear LED panel (VEU)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
12	34	Office	Downlight CFL	Downlight LED (VEU)	8%	8%	8%	7%	7%	7%	7%	8%	8%	8%	8%	9%	9%	9%	10%	10%	10%	11%	11%
13	34	Office	Downlight halogen	Downlight LED (VEU)	8%	8%	8%	7%	7%	7%	7%	8%	8%	8%	8%	9%	9%	9%	10%	10%	10%	11%	11%
14	34	Office	Downlight LED (BaU)	Downlight LED (VEU)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
15	34	Office	Bay/shop HID	Bay/shop LED (VEU)	10%	10%	10%	8%	9%	9%	9%	9%	10%	10%	10%	11%	11%	12%	12%	13%	13%	14%	14%
16	34	Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
17	34	Office	Linear T5	Linear LED tube (VEU)	8%	8%	9%	7%	7%	8%	8%	8%	8%	9%	9%	9%	10%	10%	10%	11%	11%	11%	12%
18	34	Office	Linear T5	Linear LED panel (VEU)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
19	34	Office	Linear T8	Linear LED tube (VEU)	9%	9%	10%	8%	8%	8%	9%	9%	9%	10%	10%	10%	11%	11%	12%	12%	13%	13%	14%
20	34	Office	Linear T8	Linear LED panel (VEU)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%
21	34	Office	Linear LED tube (BaU)	Linear LED tube (VEU)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
22	34	Office	Linear LED panel (BaU)	Linear LED panel (VEU)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
23	34	Industrial	Downlight CFL	Downlight LED (VEU)	20%	21%	22%	17%	17%	18%	19%	20%	21%	22%	23%	24%	25%	26%	28%	29%	30%	32%	33%
24	34	Industrial	Downlight halogen	Downlight LED (VEU)	20%	21%	22%	17%	17%	18%	19%	20%	21%	22%	23%	24%	25%	26%	28%	29%	30%	32%	33%
25	34	Industrial	Downlight LED (BaU)	Downlight LED (VEU)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
26						50%								_	50%					50%	50%	50%	
	34	Industrial	Bay/shop HID	Bay/shop LED (VEU)	50%		50%	50%	50%	50%	50%	50%	50%	50%		50%	50% 0%	50%	50%				50%
27	34	Industrial	Bay/shop LED (BaU)	Bay/shop LED (VEU)	0%	0% 23%	0%	0% 18%	0%	0% 20%	0% 20%	0%	0% 22%	0% 24%	0% 25%	0%	27%	0% 28%	0%	0% 31%	1% 33%	1% 35%	1%
28	34	Industrial	Linear T5	Linear LED tube (VEU)	22%		24%		19%			21%				26%			30%				36%
29	34	Industrial	Linear T5	Linear LED panel (VEU)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
30	34	Industrial	Linear T8	Linear LED tube (VEU)	26%	27%	28%	21%	22%	23%	24%	25%	27%	28%	29%	31%	32%	34%	35%	37%	39%	41%	43%
31	34	Industrial	Linear T8	Linear LED panel (VEU)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
32	34	Industrial	Linear LED tube (BaU)	Linear LED tube (VEU)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
33	34	Industrial	Linear LED panel (BaU)	Linear LED panel (VEU)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
34	35		Bay/shop HID	Bay/shop LED (VEU)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
35	35		Bay/shop LED (BaU)	Bay/shop LED (VEU)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
36	35	Non-building		Linear LED tube (VEU)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%	3%	3%
37	35	Non-building		Linear LED panel (VEU)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
38	35		Linear LED tube (BaU)	Linear LED tube (VEU)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
39	35		Linear LED panel (BaU)	Linear LED panel (VEU)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
40	27	Public	Public MV 80W	Public LED equ MV 80W (VEU)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
41	27	Public	Public LED equ MV 80W (BaU)	Public LED equ MV 80W (VEU)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
42	27	Public	Public MV 125W	Public LED equ MV 125W (VEU)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
43	27	Public		Public LED equ MV 125W (VEU)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
44	27	Public	Public HPS 100W	Public LED equ HPS 100W (VEU)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%
45	27	Public	Public LED equ HPS 100W (BaU)	Public LED equ HPS 100W (VEU)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
46	27	Public	Public HPS 150W	Public LED equ HPS 150W (VEU)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%	2%
47	27	Public	Public LED equ HPS 150W (BaU)	Public LED equ HPS 150W (VEU)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
48	27	Public	Public HPS 250W	Public LED equ HPS 250W (VEU)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%	3%	3%	3%	3%	3%
49	27	Public	Public LED equ HPS 250W (BaU)	Public LED equ HPS 250W (VEU)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
50	27	Public	Public HPS 400W	Public LED equ HPS 400W (VEU)	3%	3%	3%	2%	3%	3%	3%	3%	3%	3%	3%	4%	4%	4%	4%	4%	4%	4%	4%
51	27	Public	Public LED equ HPS 400W (BaU)	Public LED equ HPS 400W (VEU)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
			. ,																				

14. Maximum possible (as % previous 6-month's stock)

T-4. IAI		iii possibii																					
ID	Part	Sector	Baseline	Install	2016b	2017a	2017b	2018a	2018b	2019a	2019b	2020a	2020b	2021a	2021b	2022a	2022b	2023a	2023b	2024a	2024b	2025a	2025b
1	34	Non-Office	Downlight CFL	Downlight LED (VEU)	44.7%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%
2	34	Non-Office	Downlight halogen	Downlight LED (VEU)	44.7%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%
3	34	Non-Office	Downlight LED (BaU)	Downlight LED (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
4	34	Non-Office	Bay/shop HID	Bay/shop LED (VEU)	44.7%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%
5	34	Non-Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
6	34	Non-Office	Linear T5	Linear LED tube (VEU)	44.7%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%
7	34	Non-Office	Linear T5	Linear LED panel (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
8	34	Non-Office	Linear T8		44.7%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%
_				Linear LED tube (VEU)																			
9	34	Non-Office	Linear T8	Linear LED panel (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
10	34	Non-Office	Linear LED tube (BaU)	Linear LED tube (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
11	34	Non-Office	Linear LED panel (BaU)	Linear LED panel (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
12	34	Office	Downlight CFL	Downlight LED (VEU)	44.7%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%
13	34	Office	Downlight halogen	Downlight LED (VEU)	44.7%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%
14	34	Office	Downlight LED (BaU)	Downlight LED (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
15	34	Office	Bay/shop HID	Bay/shop LED (VEU)	44.7%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%
16	34	Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
17	34	Office	Linear T5	Linear LED tube (VEU)	44.7%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%
18	34	Office	Linear T5	Linear LED panel (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
19	34	Office	Linear T8	Linear LED tube (VEU)	44.7%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%
20	34	Office	Linear T8	Linear LED tube (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
							1%			1%	1%		1%	1%		1%		1%		1%	1%		
21	34	Office	Linear LED tube (BaU)	Linear LED tube (VEU)	1.0%	1%		1%	1%	-		1%		-	1%		1%		1%			1%	1%
22	34	Office	Linear LED panel (BaU)	Linear LED panel (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
23	34	Industrial	Downlight CFL	Downlight LED (VEU)	55.9%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%
24	34	Industrial	Downlight halogen	Downlight LED (VEU)	55.9%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%
25	34	Industrial	Downlight LED (BaU)	Downlight LED (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
26	34	Industrial	Bay/shop HID	Bay/shop LED (VEU)	55.9%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%
27	34	Industrial	Bay/shop LED (BaU)	Bay/shop LED (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
28	34	Industrial	Linear T5	Linear LED tube (VEU)	55.9%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%
29	34	Industrial	Linear T5	Linear LED panel (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
30	34	Industrial	Linear T8	Linear LED tube (VEU)	55.9%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%
31	34	Industrial	Linear T8	Linear LED panel (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
32	34	Industrial	Linear LED tube (BaU)	Linear LED tube (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
33	34	Industrial	Linear LED panel (BaU)	Linear LED panel (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
34	35	Non-building		Bay/shop LED (VEU)	5.0%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
35	35		Bay/shop LED (BaU)	Bay/shop LED (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
36	35	Non-building		Linear LED tube (VEU)	5.0%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
37	35	Non-building	Linear T8	Linear LED panel (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
38	35	Non-building	Linear LED tube (BaU)	Linear LED tube (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
39	35	Non-building	Linear LED panel (BaU)	Linear LED panel (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
40	27	Public	Public MV 80W	Public LED equ MV 80W (VEU)	5.0%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
41	27	Public	Public LED equ MV 80W (BaU)	Public LED equ MV 80W (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
42	27	Public	Public MV 125W	Public LED equ MV 125W (VEU)	5.0%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
43	27	Public	Public LED equ MV 125W (BaU)	Public LED equ MV 125W (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
44	27	Public	Public HPS 100W	Public LED equ HPS 100W (VEU)	5.0%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
45	27	Public		Public LED equ HPS 100W (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
	27					5%	5%	-	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	
46		Public	Public HPS 150W	Public LED equ HPS 150W (VEU)	5.0%			5%															5%
47	27	Public		Public LED equ HPS 150W (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
48	27	Public	Public HPS 250W	Public LED equ HPS 250W (VEU)	5.0%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
49	27	Public		Public LED equ HPS 250W (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
50	27	Public	Public HPS 400W	Public LED equ HPS 400W (VEU)	5.0%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
51	27	Public	Public LED equ HPS 400W (BaU)	Public LED equ HPS 400W (VEU)	1.0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%

13. VEEC subsidy as % of cost

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ID	Part		Baseline	Install	2016b	2017a	2017b	2018a	2018b	2019a	2019b	2020a	2020b	2021a	2021b	2022a	2022b	2023a	2023b	2024a	2024b	2025a	2025b
1	34	Non-Office	Downlight CFL	Downlight LED (VEU)	61%	63%	65%	55%	57%	58%	60%	61%	63%	65%	66%	68%	70%	72%	74%	76%	78%	80%	82%
2	34	Non-Office	Downlight halogen	Downlight LED (VEU)	61%	63%	65%	55%	57%	58%	60%	61%	63%	65%	66%	68%	70%	72%	74%	76%	78%	80%	82%
3	34	Non-Office	Downlight LED (BaU)	Downlight LED (VEU)	15%	15%	16%	14%	15%	15%	16%	17%	18%	18%	19%	20%	21%	22%	23%	24%	24%	25%	26%
4	34	Non-Office	Bay/shop HID	Bay/shop LED (VEU)	100%	100%	100%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
5	34	Non-Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)	36%	38%	39%	33%	35%	36%	37%	38%	39%	41%	42%	43%	45%	46%	48%	49%	51%	52%	54%
6	34	Non-Office	Linear T5	Linear LED tube (VEU)	64%	66%	68%	58%	59%	61%	63%	64%	66%	68%	69%	71%	73%	75%	77%	79%	81%	83%	85%
7	34	Non-Office	Linear T5	Linear LED panel (VEU)	86%	88%	91%	77%	79%	81%	83%	86%	88%	90%	93%	95%	98%	100%	100%	100%	100%	100%	100%
8	34	Non-Office	Linear T8	Linear LED tube (VEU)	71%	73%	75%	63%	65%	67%	69%	70%	72%	74%	76%	78%	80%	82%	84%	86%	89%	91%	93%
9	34	Non-Office	Linear T8	Linear LED panel (VEU)	95%	97%	100%	85%	87%	89%	91%	94%	96%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%
10	34	Non-Office	Linear LED tube (BaU)	Linear LED tube (VEU)	20%	21%	22%	19%	19%	20%	21%	22%	23%	23%	24%	25%	26%	27%	28%	29%	30%	31%	32%
11	34	Non-Office	Linear LED panel (BaU)	Linear LED panel (VEU)	26%	28%	29%	25%	26%	27%	28%	29%	30%	31%	32%	34%	35%	36%	37%	39%	40%	42%	43%
12	34	Office	Downlight CFL	Downlight LED (VEU)	37%	38%	39%	33%	34%	35%	36%	37%	38%	39%	40%	41%	42%	43%	44%	45%	47%	48%	49%
13	34	Office	Downlight halogen	Downlight LED (VEU)	37%	38%	39%	33%	34%	35%	36%	37%	38%	39%	40%	41%	42%	43%	44%	45%	47%	48%	49%
14	34	Office	Downlight LED (BaU)	Downlight LED (VEU)	9%	9%	10%	8%	9%	9%	10%	10%	11%	11%	12%	12%	13%	13%	14%	14%	15%	15%	16%
15	34	Office	Bay/shop HID	Bay/shop LED (VEU)	45%	46%	47%	40%	41%	42%	43%	44%	45%	46%	47%	48%	49%	51%	52%	53%	55%	56%	57%
16	34	Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)	15%	15%	16%	13%	14%	14%	15%	15%	16%	16%	17%	17%	18%	19%	19%	20%	20%	21%	22%
17	34	Office	Linear T5	Linear LED tube (VEU)	39%	40%	41%	35%	36%	37%	38%	39%	40%	41%	42%	43%	44%	45%	46%	47%	49%	50%	51%
18	34	Office	Linear T5	Linear LED panel (VEU)	52%	53%	54%	46%	47%	49%	50%	51%	53%	54%	56%	57%	59%	60%	62%	63%	65%	67%	68%
19	34	Office	Linear T8	Linear LED tube (VEU)	43%	44%	45%	38%	39%	40%	41%	42%	43%	44%	46%	47%	48%	49%	51%	52%	53%	54%	56%
20	34	Office	Linear T8	Linear LED panel (VEU)	57%	58%	60%	51%	52%	53%	55%	56%	58%	59%	61%	62%	64%	66%	67%	69%	71%	73%	74%
21	34	Office	Linear LED tube (BaU)	Linear LED tube (VEU)	12%	12%	13%	11%	12%	12%	13%	13%	14%	14%	15%	15%	16%	16%	17%	17%	18%	19%	19%
22	34	Office	Linear LED panel (BaU)	Linear LED panel (VEU)	16%	17%	17%	15%	15%	16%	17%	17%	18%	19%	19%	20%	21%	22%	22%	23%	24%	25%	26%
23	34	Industrial	Downlight CFL	Downlight LED (VEU)	61%	63%	65%	55%	57%	58%	60%	61%	63%	65%	66%	68%	70%	72%	74%	76%	78%	80%	82%
24	34	Industrial	Downlight halogen	Downlight LED (VEU)	61%	63%	65%	55%	57%	58%	60%	61%	63%	65%	66%	68%	70%	72%	74%	76%	78%	80%	82%
25	34	Industrial	Downlight LED (BaU)	Downlight LED (VEU)	15%	15%	16%	14%	15%	15%	16%	17%	18%	18%	19%	20%	21%	22%	23%	24%	24%	25%	26%
26	34	Industrial	Bay/shop HID	Bay/shop LED (VEU)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
27	34	Industrial	Bay/shop LED (BaU)	Bay/shop LED (VEU)	55%	57%	59%	50%	52%	54%	55%	57%	59%	61%	63%	65%	67%	69%	72%	74%	76%	79%	81%
28 29	34	Industrial	Linear T5 Linear T5	Linear LED tube (VEU)	64% 86%	66%	68%	58% 77%	59%	61%	63% 83%	64% 86%	66%	68% 90%	69% 93%	71%	73% 98%	75% 100%	77%	79% 100%	81%	83%	85% 100%
-	34	Industrial		Linear LED panel (VEU)		88%	91%	-	79%	81%			88%			95%			100%		100%	100%	
30 31	34	Industrial	Linear T8 Linear T8	Linear LED tube (VEU) Linear LED panel (VEU)	71%	73% 97%	75%	63%	65% 87%	67% 89%	69%	70%	72%	74%	76% 100%	78% 100%	80% 100%	82% 100%	84% 100%	86% 100%	89% 100%	91% 100%	93% 100%
32	34	Industrial			95%	21%	100%	85% 19%	19%		91%	94% 22%	96% 23%	99% 23%		25%	26%		28%	29%			32%
	34	Industrial Industrial	Linear LED tube (BaU)	Linear LED tube (VEU)	20%		22%			20%	21%				24%			27%			30%	31%	43%
33 34	34 35		Linear LED panel (BaU) Bay/shop HID	Linear LED panel (VEU) Bay/shop LED (VEU)	26% 100%	28% 100%	29% 100%	25% 100%	26% 100%	27% 100%	28% 100%	29% 100%	30% 100%	31% 100%	32% 100%	34% 100%	35% 100%	36%	37% 100%	39% 100%	40%	42% 100%	100%
35	35		Bay/shop LED (BaU)	Bay/shop LED (VEU)	39%	41%	42%	36%	37%	39%	40%	41%	43%	44%	45%	47%	48%	100% 50%	52%	53%	100% 55%	57%	58%
36	35			Linear LED tube (VEU)		66%	67%	57%	59%	60%	62%		65%	67%	68%	70%	72%	74%	76%	78%	80%	82%	84%
37	35	Non-building Non-building		Linear LED tube (VEU)	64% 85%	87%	90%	76%	78%	80%	82%	63% 84%	87%	89%	91%	94%	96%	99%	100%	100%	100%	100%	100%
38	35		Linear LED tube (BaU)	Linear LED tube (VEU)	18%	19%	19%	17%	17%	18%	19%	20%	20%	21%	22%	23%	24%	24%	25%	26%	27%	28%	29%
39	35		Linear LED tube (BaU)	Linear LED tube (VEU)	24%	25%	26%	22%	23%	24%	25%	26%	27%	28%	29%	30%	31%	33%	34%	35%	36%	37%	39%
40	27	Public	Public MV 80W	Public LED equ MV 80W (VEU)	30%	30%	31%	26%	27%	28%	28%	29%	30%	30%	31%	32%	32%	33%	34%	35%	36%	36%	37%
41	27	Public	Public LED equ MV 80W (BaU)	Public LED equ MV 80W (VEU)	11%	11%	11%	10%	10%	10%	11%	11%	11%	12%	12%	12%	13%	13%	13%	14%	14%	15%	15%
42	27	Public	Public MV 125W	Public LED equ MV 125W (VEU)	34%	35%	36%	31%	31%	32%	33%	34%	35%	36%	37%	37%	38%	39%	40%	41%	42%	43%	44%
43	27	Public	Public LED equ MV 125W (BaU)		11%	11%	12%	10%	10%	11%	11%	12%	12%	12%	13%	13%	14%	14%	15%	15%	15%	16%	16%
44	27	Public	Public HPS 100W	Public LED equ HPS 100W (VEU)	46%	47%	48%	40%	41%	42%	43%	44%	45%	46%	47%	49%	50%	51%	52%	53%	54%	56%	57%
45	27	Public		Public LED equ HPS 100W (VEU)	18%	18%	19%	16%	16%	17%	17%	18%	18%	19%	19%	20%	20%	21%	22%	22%	23%	23%	24%
46	27	Public	Public HPS 150W	Public LED equ HPS 150W (VEU)	47%	48%	50%	42%	43%	44%	45%	46%	47%	48%	50%	51%	52%	53%	55%	56%	57%	58%	60%
47	27	Public		Public LED equ HPS 150W (VEU)	17%	17%	18%	15%	16%	16%	17%	17%	18%	18%	19%	19%	20%	21%	21%	22%	22%	23%	24%
48	27	Public	Public HPS 250W	Public LED equ HPS 250W (VEU)	69%	71%	73%	61%	63%	65%	66%	68%	69%	71%	73%	75%	76%	78%	80%	82%	84%	86%	88%
49	27	Public		Public LED equ HPS 250W (VEU)	24%	25%	26%	22%	23%	23%	24%	25%	26%	26%	27%	28%	29%	30%	31%	32%	33%	33%	34%
50	27	Public	Public HPS 400W	Public LED equ HPS 400W (VEU)	83%	85%	87%	73%	75%	77%	79%	81%	83%	85%	87%	89%	91%	93%	96%	98%	100%	100%	100%
51	27	Public		Public LED equ HPS 400W (VEU)	29%	30%	31%	26%	27%	28%	29%	30%	31%	32%	32%	33%	34%	36%	37%	38%	39%	40%	41%
31	2,	. ubiic	. done zeo equini 3 400 W (bao)	. abc EED cqu iii 3 400 W (VEO)	23/0	3076	31/0	2070	2,70	20/8	2370	3078	31/6	32/6	32/0	3378	3470	30/6	3770	3076	3376	7070	41/0

12.	Supply	+install cos	Decrease in LED	supply+install price, per 6 months		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
ID	Part	Sector	Baseline	Install	2016b	2017a	2017b	2018a	2018b	2019a	2019b	2020a	2020b	2021a	2021b	2022a	2022b	2023a	2023b	2024a	2024b	2025a	2025b
1	34	Non-Office	Downlight CFL	Downlight LED (VEU)	\$35	\$34	\$34	\$33	\$32	\$32	\$31	\$30	\$30	\$29	\$29	\$28	\$27	\$27	\$26	\$26	\$25	\$25	\$24
2	34	Non-Office	Downlight halogen	Downlight LED (VEU)	\$35	\$34	\$34	\$33	\$32	\$32	\$31	\$30	\$30	\$29	\$29	\$28	\$27	\$27	\$26	\$26	\$25	\$25	\$24
3	34	Non-Office	Downlight LED (BaU)	Downlight LED (VEU)	\$35	\$34	\$34	\$33	\$32	\$32	\$31	\$30	\$30	\$29	\$29	\$28	\$27	\$27	\$26	\$26	\$25	\$25	\$24
4	34	Non-Office	Bay/shop HID	Bay/shop LED (VEU)	\$150	\$147	\$144	\$141	\$138	\$136	\$133	\$130	\$128	\$125	\$123	\$120	\$118	\$115	\$113	\$111	\$109	\$106	\$104
5	34	Non-Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)	\$150	\$147	\$144	\$141	\$138	\$136	\$133	\$130	\$128	\$125	\$123	\$120	\$118	\$115	\$113	\$111	\$109	\$106	\$104
6	34	Non-Office	Linear T5	Linear LED tube (VEU)	\$50	\$49	\$48	\$47	\$46	\$45	\$44	\$43	\$43	\$42	\$41	\$40	\$39	\$38	\$38	\$37	\$36	\$35	\$35
7	34	Non-Office	Linear T5	Linear LED panel (VEU)	\$75	\$74	\$72	\$71	\$69	\$68	\$66	\$65	\$64	\$63	\$61	\$60	\$59	\$58	\$57	\$55	\$54	\$53	\$52
8	34	Non-Office	Linear T8	Linear LED tube (VEU)	\$50	\$49	\$48	\$47	\$46	\$45	\$44	\$43	\$43	\$42	\$41	\$40	\$39	\$38	\$38	\$37	\$36	\$35	\$35
9	34	Non-Office	Linear T8	Linear LED panel (VEU)	\$75	\$74	\$72	\$71	\$69	\$68	\$66	\$65	\$64	\$63	\$61	\$60	\$59	\$58	\$57	\$55	\$54	\$53	\$52
10	34	Non-Office	Linear LED tube (BaU)	Linear LED tube (VEU)	\$50	\$49	\$48	\$47	\$46	\$45	\$44	\$43	\$43	\$42	\$41	\$40	\$39	\$38	\$38	\$37	\$36	\$35	\$35
11	34	Non-Office	Linear LED panel (BaU)	Linear LED panel (VEU)	\$75	\$74	\$72	\$71	\$69	\$68	\$66	\$65	\$64	\$63	\$61	\$60	\$59	\$58	\$57	\$55	\$54	\$53	\$52
12	34	Office	Downlight CFL	Downlight LED (VEU)	\$35	\$34	\$34	\$33	\$32	\$32	\$31	\$30	\$30	\$29	\$29	\$28	\$27	\$27	\$26	\$26	\$25	\$25	\$24
13	34	Office	Downlight halogen	Downlight LED (VEU)	\$35	\$34	\$34	\$33	\$32	\$32	\$31	\$30	\$30	\$29	\$29	\$28	\$27	\$27	\$26	\$26	\$25	\$25	\$24
14	34		Downlight LED (BaU)	Downlight LED (VEU)	\$35	\$34	\$34	\$33	\$32	\$32	\$31	\$30	\$30	\$29	\$29	\$28	\$27	\$27	\$26	\$26	\$25	\$25	\$24
15	34	Office	Bay/shop HID	Bay/shop LED (VEU)	\$150	\$147	\$144	\$141	\$138	\$136	\$133	\$130	\$128	\$125	\$123	\$120	\$118	\$115	\$113	\$111	\$109	\$106	\$104
16	34		Bay/shop LED (BaU)	Bay/shop LED (VEU)	\$150	\$147	\$144	\$141	\$138	\$136	\$133	\$130	\$128	\$125	\$123	\$120	\$118	\$115	\$113	\$111	\$109	\$106	\$104
17	34	Office	Linear T5	Linear LED tube (VEU)	\$50	\$49	\$48	\$47	\$46	\$45	\$44	\$43	\$43	\$42	\$41	\$40	\$39	\$38	\$38	\$37	\$36	\$35	\$35
18	34	Office	Linear T5	Linear LED panel (VEU)	\$75	\$74	\$72	\$71	\$69	\$68	\$66	\$65	\$64	\$63	\$61	\$60	\$59	\$58	\$57	\$55	\$54	\$53	\$52
19	34	Office	Linear T8	Linear LED tube (VEU)	\$50	\$49	\$48	\$47	\$46	\$45	\$44	\$43	\$43	\$42	\$41	\$40	\$39	\$38	\$38	\$37	\$36	\$35	\$35
20	34	Office	Linear T8	Linear LED panel (VEU)	\$75	\$74	\$72	\$71	\$69	\$68	\$66	\$65	\$64	\$63	\$61	\$60	\$59	\$58	\$57	\$55	\$54	\$53	\$52
21	34	Office	Linear LED tube (BaU)	Linear LED tube (VEU)	\$50	\$49	\$48	\$47	\$46	\$45	\$44	\$43	\$43	\$42	\$41	\$40	\$39	\$38	\$38	\$37	\$36	\$35	\$35
22	34	Office	Linear LED panel (BaU)	Linear LED panel (VEU)	\$75	\$74	\$72	\$71	\$69	\$68	\$66	\$65	\$64	\$63	\$61	\$60	\$59	\$58	\$57	\$55	\$54	\$53	\$52
23	34	Industrial	Downlight CFL	Downlight LED (VEU)	\$35	\$34	\$34	\$33	\$32	\$32	\$31	\$30	\$30	\$29	\$29	\$28	\$27	\$27	\$26	\$26	\$25	\$25	\$24
24	34	Industrial	Downlight halogen	Downlight LED (VEU)	\$35	\$34	\$34	\$33	\$32	\$32	\$31	\$30	\$30	\$29	\$29	\$28	\$27	\$27	\$26	\$26	\$25	\$25	\$24
25	34	Industrial	Downlight LED (BaU)	Downlight LED (VEU)	\$35	\$34	\$34	\$33	\$32	\$32	\$31	\$30	\$30	\$29	\$29	\$28	\$27	\$27	\$26	\$26	\$25	\$25	\$24
26	34	Industrial	Bay/shop HID	Bay/shop LED (VEU)	\$200	\$196	\$192	\$188	\$184	\$181	\$177	\$174	\$170	\$167	\$163	\$160	\$157	\$154	\$151	\$148	\$145	\$142	\$139
27	34	Industrial	Bay/shop LED (BaU)	Bay/shop LED (VEU)	\$200	\$196	\$192	\$188	\$184	\$181	\$177	\$174	\$170	\$167	\$163	\$160	\$157	\$154	\$151	\$148	\$145	\$142	\$139
28	34		Linear T5	Linear LED tube (VEU)	\$50	\$49	\$48	\$47	\$46	\$45	\$44	\$43	\$43	\$42	\$41	\$40	\$39	\$38	\$38	\$37	\$36	\$35	\$35
29	34		Linear T5	Linear LED panel (VEU)	\$75	\$74	\$72	\$71	\$69	\$68	\$66	\$65	\$64	\$63	\$61	\$60	\$59	\$58	\$57	\$55	\$54	\$53	\$52
30	34		Linear T8	Linear LED tube (VEU)	\$50	\$49	\$48	\$47	\$46	\$45	\$44	\$43	\$43	\$42	\$41	\$40	\$39	\$38	\$38	\$37	\$36	\$35	\$35
31	34		Linear T8	Linear LED panel (VEU)	\$75	\$74	\$72	\$71	\$69	\$68	\$66	\$65	\$64	\$63	\$61	\$60	\$59	\$58	\$57	\$55	\$54	\$53	\$52
32	34		Linear LED tube (BaU)	Linear LED tube (VEU)	\$50	\$49	\$48	\$47	\$46	\$45	\$44	\$43	\$43	\$42	\$41	\$40	\$39	\$38	\$38	\$37	\$36	\$35	\$35
33	34		Linear LED panel (BaU)	Linear LED panel (VEU)	\$75	\$74	\$72	\$71	\$69	\$68	\$66	\$65	\$64	\$63	\$61	\$60	\$59	\$58	\$57	\$55	\$54	\$53	\$52
34	35		Bay/shop HID	Bay/shop LED (VEU)	\$250	\$245	\$240	\$235	\$231	\$226	\$221	\$217	\$213	\$208	\$204	\$200	\$196	\$192	\$188	\$185	\$181	\$177	\$174
35	35		Bay/shop LED (BaU)	Bay/shop LED (VEU)	\$250	\$245	\$240	\$235	\$231	\$226	\$221	\$217	\$213	\$208	\$204	\$200	\$196	\$192	\$188	\$185	\$181	\$177	\$174
36	35			Linear LED tube (VEU)	\$50	\$49	\$48	\$47	\$46	\$45	\$44	\$43	\$43	\$42	\$41	\$40	\$39	\$38	\$38	\$37	\$36	\$35	\$35
37	35			Linear LED panel (VEU)	\$75	\$74	\$72	\$71	\$69	\$68	\$66	\$65	\$64	\$63	\$61	\$60	\$59	\$58	\$57	\$55	\$54	\$53	\$52
38	35		Linear LED tube (BaU)	Linear LED tube (VEU)	\$50	\$49	\$48	\$47	\$46	\$45	\$44	\$43	\$43	\$42	\$41	\$40	\$39	\$38	\$38	\$37	\$36	\$35	\$35
39	35		Linear LED panel (BaU)	Linear LED panel (VEU)	\$75	\$74	\$72	\$71	\$69	\$68	\$66	\$65	\$64	\$63	\$61	\$60	\$59	\$58	\$57	\$55	\$54	\$53	\$52
40	27		Public MV 80W	Public LED equ MV 80W (VEU)	\$250	\$245	\$240	\$235	\$231	\$226	\$221	\$217	\$213	\$208	\$204	\$200	\$196	\$192	\$188	\$185	\$181	\$177	\$174
41	27		Public LED equ MV 80W (BaU)	Public LED equ MV 80W (VEU)	\$250	\$245	\$240	\$235	\$231	\$226	\$221	\$217	\$213	\$208	\$204	\$200	\$196	\$192	\$188	\$185	\$181	\$177	\$174
42	27		Public MV 125W	Public LED equ MV 125W (VEU)	\$250	\$245	\$240	\$235	\$231	\$226	\$221	\$217	\$213	\$208	\$204	\$200	\$196	\$192	\$188	\$185	\$181	\$177	\$174
43	27		Public LED equ MV 125W (BaU)		\$250	\$245	\$240	\$235	\$231	\$226	\$221	\$217	\$213	\$208	\$204	\$200	\$196	\$192	\$188	\$185	\$181	\$177	\$174
44	27		Public HPS 100W	Public LED equ HPS 100W (VEU)	\$250	\$245	\$240	\$235	\$231	\$226	\$221	\$217	\$213	\$208	\$204	\$200	\$196	\$192	\$188	\$185	\$181	\$177	\$174
45	27			Public LED equ HPS 100W (VEU)	\$250	\$245	\$240	\$235	\$231	\$226	\$221	\$217	\$213	\$208	\$204	\$200	\$196	\$192	\$188	\$185	\$181	\$177	\$174
46	27		Public HPS 150W	Public LED equ HPS 150W (VEU)	\$275	\$270	\$264	\$259	\$254	\$249	\$244	\$239	\$234	\$229	\$225	\$220	\$216	\$211	\$207	\$203	\$199	\$195	\$191
47	27			Public LED equ HPS 150W (VEU)	\$275	\$270	\$264	\$259	\$254	\$249	\$244	\$239	\$234	\$229	\$225	\$220	\$216	\$211	\$207	\$203	\$199	\$195	\$191
48	27		Public HPS 250W	Public LED equ HPS 250W (VEU)	\$300	\$294	\$288	\$282	\$277	\$271	\$266	\$260	\$255	\$250	\$245	\$240	\$235	\$231	\$226	\$222	\$217	\$213	\$209
49	27	Public		Public LED equ HPS 250W (VEU)	\$300	\$294	\$288	\$282	\$277	\$271	\$266	\$260	\$255	\$250	\$245	\$240	\$235	\$231	\$226	\$222	\$217	\$213	\$209
50	27		Public HPS 400W	Public LED equ HPS 400W (VEU)	\$400	\$392	\$384	\$376	\$369	\$362	\$354	\$347	\$340	\$333	\$327	\$320	\$314	\$308	\$301	\$295	\$290	\$284	\$278
51	27	Public	Public LED equ HPS 400W (BaU)	Public LED equ HPS 400W (VEU)	\$400	\$392	\$384	\$376	\$369	\$362	\$354	\$347	\$340	\$333	\$327	\$320	\$314	\$308	\$301	\$295	\$290	\$284	\$278

11. VEEC value per install

		.ac pcs	· · · · ·																				
ID	Part	Sector	Baseline	Install	2016b	2017a	2017b	2018a	2018b	2019a	2019b	2020a	2020b	2021a	2021b	2022a	2022b	2023a	2023b	2024a	2024b	2025a	2025b
1	34		Downlight CFL	Downlight LED (VEU)	\$21	\$22	\$22	\$18	\$18	\$18	\$18	\$19	\$19	\$19	\$19	\$19	\$19	\$19	\$19	\$20	\$20	\$20	\$20
2	34	Non-Office	Downlight halogen	Downlight LED (VEU)	\$21	\$22	\$22	\$18	\$18	\$18	\$18	\$19	\$19	\$19	\$19	\$19	\$19	\$19	\$19	\$20	\$20	\$20	\$20
3	34	Non-Office	Downlight LED (BaU)	Downlight LED (VEU)	\$5	\$5	\$5	\$5	\$5	\$5	\$5	\$5	\$5	\$5	\$6	\$6	\$6	\$6	\$6	\$6	\$6	\$6	\$6
4	34	Non-Office	Bay/shop HID	Bay/shop LED (VEU)	\$167	\$168	\$169	\$140	\$141	\$141	\$142	\$143	\$143	\$144	\$144	\$145	\$146	\$146	\$147	\$147	\$148	\$148	\$149
5	34	Non-Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)	\$55	\$55	\$56	\$47	\$48	\$48	\$49	\$50	\$50	\$51	\$52	\$52	\$53	\$53	\$54	\$55	\$55	\$56	\$56
6	34	Non-Office	Linear T5	Linear LED tube (VEU)	\$32	\$32	\$33	\$27	\$27	\$28	\$28	\$28	\$28	\$28	\$28	\$29	\$29	\$29	\$29	\$29	\$29	\$29	\$30
7	34	Non-Office	Linear T5	Linear LED panel (VEU)	\$64	\$65	\$65	\$54	\$55	\$55	\$55	\$56	\$56	\$56	\$57	\$57	\$57	\$58	\$58	\$58	\$59	\$59	\$59
8	34	Non-Office	Linear T8	Linear LED tube (VEU)	\$35	\$36	\$36	\$30	\$30	\$30	\$30	\$31	\$31	\$31	\$31	\$31	\$31	\$32	\$32	\$32	\$32	\$32	\$32
9	34	Non-Office	Linear T8	Linear LED panel (VEU)	\$71	\$71	\$72	\$60	\$60	\$60	\$61	\$61	\$61	\$62	\$62	\$62	\$63	\$63	\$63	\$64	\$64	\$64	\$65
10	34	Non-Office	Linear LED tube (BaU)	Linear LED tube (VEU)	\$10	\$10	\$10	\$9	\$9	\$9	\$9	\$9	\$10	\$10	\$10	\$10	\$10	\$10	\$11	\$11	\$11	\$11	\$11 \$22
11	34 34	Non-Office Office	Linear LED panel (BaU)	Linear LED panel (VEU)	\$20	\$20	\$21	\$17	\$18	\$18	\$19	\$19	\$19	\$20	\$20	\$20	\$21	\$21	\$21	\$22	\$22	\$22	
12			Downlight CFL	Downlight LED (VEU)	\$13 \$13	\$13	\$13 \$13	\$11	\$11	\$11	\$11	\$11	\$11	\$11	\$11	\$11	\$12	\$12	\$12 \$12	\$12	\$12	\$12 \$12	\$12
13	34	Office	Downlight halogen	Downlight LED (VEU)		\$13		\$11	\$11	\$11	\$11	\$11	\$11	\$11	\$11	\$11	\$12	\$12		\$12	\$12		\$12
14	34 34	Office	Downlight LED (BaU)	Downlight LED (VEU)	\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$4	\$4	\$4	\$4	\$4	\$4
15		Office	Bay/shop HID	Bay/shop LED (VEU)	\$67	\$67	\$67	\$56	\$56	\$56	\$57	\$57	\$57	\$58	\$58	\$58	\$58	\$58	\$59	\$59	\$59	\$59	\$60
16	34	Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)	\$22	\$22	\$22	\$19	\$19	\$19	\$20	\$20	\$20	\$20	\$21	\$21	\$21	\$21	\$22	\$22	\$22	\$22	\$22
17	34 34	Office Office	Linear T5	Linear LED tube (VEU)	\$19	\$19	\$20	\$16	\$16	\$17	\$17	\$17	\$17	\$17	\$17	\$17	\$17	\$17	\$17	\$18	\$18	\$18	\$18
18 19	34	Office	Linear T5 Linear T8	Linear LED panel (VEU) Linear LED tube (VEU)	\$39 \$21	\$39 \$21	\$39 \$22	\$33 \$18	\$33 \$18	\$33 \$18	\$33 \$18	\$33 \$18	\$34	\$34 \$19	\$34 \$19	\$34 \$19	\$34 \$19	\$35 \$19	\$35 \$19	\$35 \$19	\$35 \$19	\$35 \$19	\$36 \$19
20	34	Office	Linear T8	Linear LED tube (VEU)	\$43	\$43	\$43	\$36	\$36	\$36	\$36	\$18	\$18	\$37	\$19		\$38	\$38	\$38	-	\$38	\$39	-
21	34	Office	Linear 18 Linear LED tube (BaU)	Linear LED panel (VEU)	\$43	\$43	\$43	\$36			\$6		\$37	\$6		\$37			\$38	\$38		\$39	\$39 \$7
22	34	Office	Linear LED tube (BaU)	Linear LED tube (VEU)	\$12	\$12	\$12	\$10	\$5 \$11	\$5 \$11	\$11	\$6 \$11	\$6 \$12	\$12	\$6 \$12	\$6 \$12	\$6 \$12	\$6 \$13	\$13	\$6 \$13	\$7 \$13	\$13	\$13
23	34	Industrial	Downlight CFL	Downlight LED (VEU)	\$12	\$22	\$22	\$18	\$18	\$18	\$18	\$19	\$19	\$12	\$12	\$12	\$12	\$19	\$19	\$20	\$20	\$20	\$20
23	34	Industrial	Downlight CFL Downlight halogen		\$21	\$22	\$22	\$18	\$18	\$18	\$18	\$19	\$19	\$19	\$19		\$19	\$19	\$19	\$20	\$20	\$20	\$20
25	34	Industrial	Downlight LED (BaU)	Downlight LED (VEU) Downlight LED (VEU)	\$5	\$5	\$5	\$5	\$5	\$5	\$5	\$19	\$5	\$5	\$6	\$19 \$6	\$6	\$6	\$6	\$6	\$6	\$6	\$6
26	34	Industrial	Bay/shop HID	Bay/shop LED (VEU)	\$334	\$336	\$337	\$280	\$281	\$282	\$284	\$285	\$286	\$288	\$289	\$290	\$291	\$292	\$294	\$295	\$296	\$297	\$298
27	34	Industrial	Bay/shop LED (BaU)	Bay/shop LED (VEU)	\$109	\$111	\$112	\$94	\$96	\$282	\$98	\$99	\$101	\$102	\$103	\$104	\$106	\$107	\$108	\$109	\$110	\$111	\$112
28	34	Industrial	Linear T5	Linear LED tube (VEU)	\$32	\$32	\$33	\$27	\$27	\$28	\$28	\$28	\$28	\$28	\$28	\$29	\$29	\$29	\$29	\$29	\$29	\$29	\$30
29	34	Industrial	Linear T5	Linear LED tube (VEU)	\$64	\$65	\$65	\$54	\$55	\$55	\$55	\$56	\$56	\$56	\$57	\$57	\$57	\$58	\$58	\$58	\$59	\$59	\$59
30	34	Industrial	Linear T8	Linear LED tube (VEU)	\$35	\$36	\$36	\$30	\$30	\$30	\$30	\$31	\$31	\$31	\$31	\$31	\$31	\$32	\$32	\$32	\$33	\$33	\$33
31	34	Industrial	Linear T8	Linear LED tube (VEU)	\$71	\$71	\$72	\$60	\$60	\$60	\$61	\$61	\$61	\$62	\$62	\$62	\$63	\$63	\$63	\$64	\$64	\$64	\$65
32	34	Industrial	Linear LED tube (BaU)	Linear LED tube (VEU)	\$10	\$10	\$10	\$9	\$9	\$9	\$9	\$9	\$10	\$10	\$10	\$10	\$10	\$10	\$11	\$11	\$11	\$11	\$11
33	34	Industrial	Linear LED panel (BaU)	Linear LED panel (VEU)	\$20	\$20	\$21	\$17	\$18	\$18	\$19	\$19	\$19	\$20	\$20	\$20	\$21	\$21	\$21	\$22	\$22	\$22	\$22
34	35	Non-building		Bay/shop LED (VEU)	\$301	\$302	\$304	\$252	\$253	\$254	\$255	\$257	\$258	\$259	\$260	\$261	\$262	\$263	\$264	\$265	\$266	\$267	\$268
35	35		Bay/shop LED (BaU)	Bay/shop LED (VEU)	\$98	\$100	\$101	\$85	\$86	\$87	\$88	\$90	\$91	\$92	\$93	\$94	\$95	\$96	\$97	\$98	\$99	\$100	\$101
36	35	Non-building		Linear LED tube (VEU)	\$32	\$32	\$32	\$27	\$27	\$27	\$27	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$29	\$29	\$29	\$29	\$29
37	35	Non-building		Linear LED panel (VEU)	\$64	\$64	\$65	\$54	\$54	\$54	\$55	\$55	\$55	\$56	\$56	\$56	\$57	\$57	\$57	\$57	\$58	\$58	\$58
38	35		Linear LED tube (BaU)	Linear LED tube (VEU)	\$9	\$9	\$9	\$8	\$8	\$8	\$8	\$8	\$9	\$9	\$9	\$9	\$9	\$9	\$10	\$10	\$10	\$10	\$10
39	35		Linear LED panel (BaU)	Linear LED panel (VEU)	\$18	\$18	\$19	\$16	\$16	\$16	\$17	\$17	\$17	\$18	\$18	\$18	\$19	\$19	\$19	\$19	\$20	\$20	\$20
40	27	Public	Public MV 80W	Public LED eau MV 80W (VEU)	\$74	\$74	\$75	\$62	\$62	\$62	\$62	\$63	\$63	\$63	\$63	\$64	\$64	\$64	\$64	\$64	\$65	\$65	\$65
41	27	Public	Public LED equ MV 80W (BaU)	Public LED equ MV 80W (VEU)	\$27	\$27	\$27	\$23	\$23	\$23	\$24	\$24	\$24	\$24	\$24	\$25	\$25	\$25	\$25	\$25	\$26	\$26	\$26
42	27	Public	Public MV 125W	Public LED equ MV 125W (VEU)	\$86	\$87	\$87	\$72	\$73	\$73	\$73	\$74	\$74	\$74	\$75	\$75	\$75	\$76	\$76	\$76	\$77	\$77	\$77
43	27	Public	Public LED equ MV 125W (BaU)		\$27	\$28	\$28	\$24	\$24	\$24	\$25	\$25	\$25	\$26	\$26	\$26	\$27	\$27	\$27	\$28	\$28	\$28	\$29
44	27	Public	Public HPS 100W	Public LED equ HPS 100W (VEU)	\$114	\$114	\$115	\$95	\$95	\$96	\$96	\$96	\$96	\$97	\$97	\$97	\$97	\$98	\$98	\$98	\$98	\$99	\$99
45	27	Public		Public LED equ HPS 100W (VEU)	\$44	\$45	\$45	\$38	\$38	\$38	\$38	\$39	\$39	\$39	\$39	\$40	\$40	\$40	\$41	\$41	\$41	\$41	\$41
46	27	Public	Public HPS 150W	Public LED equ HPS 150W (VEU)	\$130	\$130	\$131	\$108	\$109	\$109	\$110	\$110	\$111	\$111	\$111	\$112	\$112	\$113	\$113	\$113	\$114	\$114	\$114
47	27	Public		Public LED equ HPS 150W (VEU)	\$46	\$47	\$47	\$39	\$40	\$40	\$41	\$41	\$41	\$42	\$42	\$43	\$43	\$43	\$44	\$44	\$45	\$45	\$45
48	27	Public	Public HPS 250W	Public LED equ HPS 250W (VEU)	\$207	\$208	\$209	\$173	\$174	\$175	\$176	\$176	\$177	\$178	\$178	\$179	\$180	\$180	\$181	\$182	\$182	\$183	\$183
49	27	Public	Public LED equ HPS 250W (BaU)	Public LED equ HPS 250W (VEU)	\$72	\$73	\$74	\$62	\$63	\$63	\$64	\$65	\$65	\$66	\$67	\$67	\$68	\$69	\$69	\$70	\$71	\$71	\$72
50	27	Public	Public HPS 400W	Public LED equ HPS 400W (VEU)	\$330	\$332	\$333	\$276	\$277	\$279	\$280	\$281	\$282	\$283	\$284	\$285	\$286	\$287	\$288	\$289	\$290	\$291	\$292
51	27	Public	Public LED equ HPS 400W (BaU)	Public LED equ HPS 400W (VEU)	\$115	\$116	\$118	\$98	\$99	\$101	\$102	\$103	\$104	\$105	\$106	\$107	\$108	\$109	\$110	\$111	\$112	\$113	\$114
			,																				

10. V	EEC pr	ice			\$20.00	\$20.00		\$16.50		\$16.50		\$16.50		\$16.50		\$16.50		\$16.50		\$16.50		\$16.50	
ID	Part	Sector	Baseline	Install	2016b	2017a	2017b	2018a	2018b	2019a	2019b	2020a	2020b	2021a	2021b	2022a	2022b	2023a	2023b	2024a	2024b	2025a	2025b
1	34	Non-Office	Downlight CFL	Downlight LED (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
2	34	Non-Office	Downlight halogen	Downlight LED (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
3	34	Non-Office	Downlight LED (BaU)	Downlight LED (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
4	34	Non-Office	Bay/shop HID	Bay/shop LED (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
5	34	Non-Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
6	34	Non-Office	Linear T5	Linear LED tube (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
7	34	Non-Office	Linear T5	Linear LED panel (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
8	34	Non-Office	Linear T8	Linear LED tube (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
9	34	Non-Office	Linear T8	Linear LED panel (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
10	34	Non-Office	Linear LED tube (BaU)	Linear LED tube (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
11	34	Non-Office	Linear LED panel (BaU)	Linear LED panel (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
12	34	Office	Downlight CFL	Downlight LED (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
13	34	Office	Downlight halogen	Downlight LED (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
14	34	Office	Downlight LED (BaU)	Downlight LED (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
15	34	Office	Bay/shop HID	Bay/shop LED (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
16	34	Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
17	34	Office	Linear T5	Linear LED tube (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
18	34	Office	Linear T5	Linear LED panel (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
19	34	Office	Linear T8	Linear LED tube (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
20	34	Office	Linear T8	Linear LED panel (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
21	34	Office	Linear LED tube (BaU)	Linear LED tube (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
22	34	Office	Linear LED panel (BaU)	Linear LED panel (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
23	34	Industrial	Downlight CFL	Downlight LED (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
24	34	Industrial	Downlight halogen	Downlight LED (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
25	34	Industrial	Downlight LED (BaU)	Downlight LED (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
26	34	Industrial	Bay/shop HID	Bay/shop LED (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
27	34	Industrial	Bay/shop LED (BaU)	Bay/shop LED (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
28	34	Industrial	Linear T5	Linear LED tube (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
29	34	Industrial	Linear T5	Linear LED panel (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
30	34	Industrial	Linear T8	Linear LED tube (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
31	34	Industrial	Linear T8	Linear LED panel (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
32	34	Industrial	Linear LED tube (BaU)	Linear LED tube (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
33	34	Industrial	Linear LED panel (BaU)	Linear LED panel (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
34	35		Bay/shop HID	Bay/shop LED (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
35	35		Bay/shop LED (BaU)	Bay/shop LED (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
36	35	Non-building		Linear LED tube (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
37	35	Non-building		Linear LED panel (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
38	35		Linear LED tube (BaU)	Linear LED tube (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
39	35		Linear LED panel (BaU)	Linear LED panel (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
40	27	Public	Public MV 80W	Public LED equ MV 80W (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
41	27	Public	Public LED equ MV 80W (BaU)	Public LED equ MV 80W (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
42	27	Public	Public MV 125W	Public LED equ MV 125W (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
43	27	Public	Public LED equ MV 125W (BaU)	Public LED equ MV 125W (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
44	27	Public	Public HPS 100W	Public LED equ HPS 100W (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
45	27	Public		Public LED equ HPS 100W (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
46	27	Public	Public HPS 150W	Public LED equ HPS 150W (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
47	27	Public	Public LED equ HPS 150W (BaU)		\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
48	27	Public	Public HPS 250W	Public LED equ HPS 250W (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
49	27	Public		Public LED equ HPS 250W (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
50	27	Public	Public HPS 400W	Public LED equ HPS 400W (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50
51	27	Public	Public LED equ HPS 400W (BaU)	Public LED equ HPS 400W (VEU)	\$20.00	\$20.00	\$20.00	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50	\$16.50

9. VEECs per install

J. VEL	cs per	IIIStaii																					
ID	Part	Sector	Baseline	Install	2016b	2017a	2017b	2018a	2018b	2019a	2019b	2020a	2020b	2021a	2021b	2022a	2022b	2023a	2023b	2024a	2024b	2025a	2025b
1	34		Downlight CFL	Downlight LED (VEU)	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
2	34	Non-Office	Downlight halogen	Downlight LED (VEU)	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
3	34	Non-Office	Downlight LED (BaU)	Downlight LED (VEU)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4
4	34	Non-Office	Bay/shop HID	Bay/shop LED (VEU)	8.4	8.4	8.4	8.5	8.5	8.6	8.6	8.6	8.7	8.7	8.8	8.8	8.8	8.9	8.9	8.9	9.0	9.0	9.0
5	34	Non-Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)	2.7	2.8	2.8	2.9	2.9	2.9	3.0	3.0	3.1	3.1	3.1	3.2	3.2	3.2	3.3	3.3	3.3	3.4	3.4
6	34	Non-Office	Linear T5	Linear LED tube (VEU)	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8
7	34	Non-Office	Linear T5	Linear LED panel (VEU)	3.2	3.2	3.3	3.3	3.3	3.3	3.4	3.4	3.4	3.4	3.4	3.5	3.5	3.5	3.5	3.5	3.6	3.6	3.6
8	34	Non-Office	Linear T8	Linear LED tube (VEU)	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0
9	34	Non-Office	Linear T8	Linear LED panel (VEU)	3.5	3.6	3.6	3.6	3.6	3.7	3.7	3.7	3.7	3.7	3.8	3.8	3.8	3.8	3.8	3.9	3.9	3.9	3.9
10	34	Non-Office	Linear LED tube (BaU)	Linear LED tube (VEU)	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7
11	34	Non-Office	Linear LED panel (BaU)	Linear LED panel (VEU)	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.4
12	34	Office	Downlight CFL	Downlight LED (VEU)	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
13	34	Office	Downlight halogen	Downlight LED (VEU)	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
14	34	Office	Downlight LED (BaU)	Downlight LED (VEU)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
15	34	Office	Bay/shop HID	Bay/shop LED (VEU)	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.6	3.6	3.6	3.6	3.6
16	34	Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.4	1.4
17	34	Office	Linear T5	Linear LED tube (VEU)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1
18	34	Office	Linear T5	Linear LED panel (VEU)	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0		2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2
19	34	Office	Linear T8	Linear LED tube (VEU)	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2
20	34	Office	Linear T8	Linear LED panel (VEU)	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4
21	34	Office	Linear LED tube (BaU)	Linear LED tube (VEU)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
22	34	Office	Linear LED panel (BaU)	Linear LED panel (VEU)	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8
23	34	Industrial	Downlight CFL	Downlight LED (VEU)	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
24	34	Industrial	Downlight halogen	Downlight LED (VEU)	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1		1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
25	34	Industrial	Downlight LED (BaU)	Downlight LED (VEU)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4
26	34	Industrial	Bay/shop HID	Bay/shop LED (VEU)	16.7	16.8	16.9	17.0	17.0	17.1	17.2	17.3	17.4	17.4	17.5	17.6	17.7	17.7	17.8	17.9	17.9	18.0	18.1
27	34	Industrial	Bay/shop LED (BaU)	Bay/shop LED (VEU)	5.5	5.5	5.6	5.7	5.8	5.9	5.9	6.0	6.1	6.2	6.3	6.3	6.4	6.5	6.5	6.6	6.7	6.8	6.8
28	34	Industrial	Linear T5	Linear LED tube (VEU)	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8
29	34	Industrial	Linear T5	Linear LED panel (VEU)	3.2	3.2	3.3	3.3	3.3	3.3	3.4	3.4		3.4	3.4	3.5	3.5	3.5	3.5	3.5	3.6	3.6	3.6
30	34	Industrial	Linear T8	Linear LED tube (VEU)	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0
31	34	Industrial	Linear T8	Linear LED panel (VEU)	3.5	3.6	3.6	3.6	3.6	3.7	3.7	3.7	3.7	3.7	3.8	3.8	3.8	3.8	3.8	3.9	3.9	3.9	3.9
32	34	Industrial	Linear LED tube (BaU)	Linear LED tube (VEU)	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7
33	34	Industrial	Linear LED panel (BaU)	Linear LED panel (VEU)	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.4
34	35	Non-building		Bay/shop LED (VEU)	15.0	15.1	15.2	15.3	15.3	15.4	15.5	15.5	15.6	15.7	15.8	15.8	15.9	16.0	16.0	16.1	16.1	16.2	16.3
35	35		Bay/shop LED (BaU)	Bay/shop LED (VEU)	4.9	5.0	5.1	5.1	5.2	5.3	5.4	5.4	5.5		5.6	5.7	5.8	5.8	5.9	6.0	6.0	6.1	6.1
36	35	Non-building		Linear LED tube (VEU)	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8
37	35	Non-building		Linear LED panel (VEU)	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.4		3.4	3.4	3.4	3.4	3.5	3.5	3.5	3.5	3.5
38	35		Linear LED tube (BaU)	Linear LED tube (VEU)	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
39	35		Linear LED panel (BaU)	Linear LED panel (VEU)	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0			1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2
40	27	Public	Public MV 80W	Public LED equ MV 80W (VEU)	3.7	3.7	3.7	3.7	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.9	3.9	3.9	3.9	3.9	3.9	3.9
41	27	Public	Public LED equ MV 80W (BaU)	Public LED equ MV 80W (VEU)	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6
42	27	Public	Public MV 125W	Public LED equ MV 125W (VEU)	4.3	4.3	4.4	4.4	4.4	4.4	4.4	4.5	4.5	4.5	4.5	4.5	4.6	4.6	4.6	4.6	4.6	4.7	4.7
43	27	Public		Public LED equ MV 125W (VEU)	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.7
44	27	Public	Public HPS 100W	Public LED equ HPS 100W (VEU)	5.7	5.7	5.7	5.8	5.8	5.8	5.8	5.8	5.8	5.9	5.9	5.9	5.9	5.9	5.9	6.0	6.0	6.0	6.0
45	27	Public		Public LED equ HPS 100W (VEU)	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.4		2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.5
46	27	Public	Public HPS 150W	Public LED equ HPS 150W (VEU)	6.5	6.5	6.5	6.6	6.6	6.6	6.7	6.7	6.7	6.7	6.8	6.8	6.8	6.8	6.8	6.9	6.9	6.9	6.9
47	27	Public		Public LED equ HPS 150W (VEU)	2.3	2.3	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.7	2.7	2.7	2.7	2.7
48	27	Public	Public HPS 250W	Public LED equ HPS 250W (VEU)	10.4	10.4	10.5	10.5	10.6	10.6	10.6	10.7	10.7	10.8	10.8	10.9	10.9	10.9	11.0	11.0	11.0	11.1	11.1
49	27	Public		Public LED equ HPS 250W (VEU)	3.6	3.7	3.7	3.7	3.8	3.8	3.9	3.9	4.0	4.0	4.0	4.1	4.1	4.2	4.2	4.2	4.3	4.3	4.4
50	27	Public	Public HPS 400W	Public LED equ HPS 400W (VEU)	16.5	16.6	16.7	16.7	16.8	16.9	17.0	17.0	17.1	17.2	17.2	17.3	17.3	17.4	17.5	17.5	17.6	17.7	17.7
51	27	Public	Public LED equ HPS 400W (BaU)	Public LED equ HPS 400W (VEU)	5.7	5.8	5.9	6.0	6.0	6.1	6.2	6.2	6.3	6.4	6.4	6.5	6.6	6.6	6.7	6.7	6.8	6.9	6.9

8. Discount factor

o. Disc	June	iactoi																					
ID	Part	Sector	Baseline	Install	2016b	2017a	2017b	2018a	2018b	2019a	2019b	2020a	2020b	2021a	2021b	2022a	2022b	2023a	2023b	2024a	2024b	2025a	2025b
1	34	Non-Office	Downlight CFL	Downlight LED (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
2	34	Non-Office	Downlight halogen	Downlight LED (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
3	34	Non-Office	Downlight LED (BaU)	Downlight LED (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
4	34	Non-Office	Bay/shop HID	Bay/shop LED (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
5	34	Non-Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
6	34	Non-Office	Linear T5	Linear LED tube (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
7	34	Non-Office	Linear T5	Linear LED panel (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
8	34	Non-Office	Linear T8	Linear LED tube (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
9	34	Non-Office	Linear T8	Linear LED panel (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
10	34	Non-Office	Linear LED tube (BaU)	Linear LED tube (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
11	34	Non-Office	Linear LED panel (BaU)	Linear LED panel (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
12	34	Office	Downlight CFL	Downlight LED (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	34	Office	Downlight halogen	Downlight LED (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
14	34	Office	Downlight LED (BaU)	Downlight LED (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
15	34	Office	Bay/shop HID	Bay/shop LED (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
16	34	Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
17	34	Office	Linear T5	Linear LED tube (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
18	34	Office	Linear T5	Linear LED panel (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
19	34	Office	Linear T8	Linear LED tube (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
20	34	Office	Linear T8	Linear LED panel (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
21	34	Office	Linear LED tube (BaU)	Linear LED tube (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
22	34	Office	Linear LED panel (BaU)	Linear LED panel (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
23	34	Industrial	Downlight CFL	Downlight LED (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
24	34	Industrial	Downlight halogen	Downlight LED (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
25	34	Industrial	Downlight LED (BaU)	Downlight LED (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
26	34	Industrial	Bay/shop HID	Bay/shop LED (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
27	34	Industrial	Bay/shop LED (BaU)	Bay/shop LED (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
28	34	Industrial	Linear T5	Linear LED tube (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
29	34	Industrial	Linear T5	Linear LED panel (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
30	34	Industrial	Linear T8	Linear LED tube (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
31	34	Industrial	Linear T8	Linear LED panel (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
32	34	Industrial	Linear LED tube (BaU)	Linear LED tube (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
33	34	Industrial	Linear LED panel (BaU)	Linear LED panel (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
34	35	Non-building		Bay/shop LED (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
35	35		Bay/shop LED (BaU)	Bay/shop LED (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
36	35	Non-building		Linear LED tube (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
37	35	Non-building		Linear LED panel (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
38	35		Linear LED tube (BaU)	Linear LED tube (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
39	35		Linear LED panel (BaU)	Linear LED panel (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
40	27	Public	Public MV 80W	Public LED equ MV 80W (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
41	27	Public	Public LED equ MV 80W (BaU)	Public LED equ MV 80W (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
42	27	Public	Public MV 125W	Public LED equ MV 125W (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
43	27	Public	Public LED equ MV 125W (BaU)		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
44	27	Public	Public HPS 100W	Public LED equ HPS 100W (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
45	27	Public		Public LED equ HPS 100W (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
46	27	Public	Public HPS 150W	Public LED equ HPS 150W (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
47	27	Public		Public LED eau HPS 150W (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
48	27	Public	Public HPS 250W	Public LED equ HPS 250W (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
49	27	Public		Public LED equ HPS 250W (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
50	27	Public	Public HPS 400W	Public LED equ HPS 400W (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
51	27	Public		Public LED equ HPS 400W (VEU)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
31	-/		. abiic 225 cqu /ii 5 400 W (Bao)	. abiic 225 cqu /ii 5 400 W (V20)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00

	egion	al factor			0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
ID	Part	Sector	Baseline	Install	2016b	2017a	2017b	2018a	2018b	2019a	2019b	2020a	2020b	2021a	2021b	2022a	2022b	2023a	2023b	2024a	2024b	2025a	2025b
1	34	Non-Office	Downlight CFL	Downlight LED (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
2	34	Non-Office	Downlight halogen	Downlight LED (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
3	34		Downlight LED (BaU)	Downlight LED (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
4	34		Bay/shop HID	Bay/shop LED (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
5	34	Non-Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
6	34		Linear T5	Linear LED tube (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
7	34		Linear T5	Linear LED panel (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
8	34		Linear T8	Linear LED tube (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
9	34		Linear T8	Linear LED panel (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
10	34		Linear LED tube (BaU)	Linear LED tube (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
11	34		Linear LED panel (BaU)	Linear LED panel (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
12	34		Downlight CFL	Downlight LED (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
13	34		Downlight halogen	Downlight LED (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
14	34		Downlight LED (BaU)	Downlight LED (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
15	34		Bay/shop HID	Bay/shop LED (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
16	34		Bay/shop LED (BaU)	Bay/shop LED (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
17	34 34		Linear T5	Linear LED tube (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
18	34		Linear T5	Linear LED panel (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
19			Linear T8	Linear LED tube (VEU)	0.995	0.995	0.995	0.995		0.995	0.995	0.995	0.995	0.995	0.995	0.995		0.995	0.995	0.995	0.995	0.995	0.995
20 21	34 34		Linear T8	Linear LED panel (VEU)	0.995	0.995 0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
22	34		Linear LED tube (BaU) Linear LED panel (BaU)	Linear LED tube (VEU)	0.995	0.995	0.995 0.995	0.995	0.995	0.995	0.995	0.995	0.995 0.995	0.995 0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995 0.995	0.995	0.995 0.995
	34			Linear LED panel (VEU)	0.995			0.995								0.995							
23 24	34		Downlight CFL Downlight halogen	Downlight LED (VEU) Downlight LED (VEU)	0.995	0.995 0.995	0.995 0.995	0.995	0.995	0.995	0.995	0.995	0.995 0.995	0.995 0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995 0.995	0.995	0.995 0.995
25	34		Downlight LED (BaU)	Downlight LED (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
26	34		. , ,	. , ,		0.995	0.995		0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
27	34		Bay/shop HID Bay/shop LED (BaU)	Bay/shop LED (VEU) Bay/shop LED (VEU)	0.995 0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
28	34		Linear T5	Linear LED tube (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
29	34		Linear T5	Linear LED tube (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
30	34		Linear T8	Linear LED tube (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
31	34		Linear T8	Linear LED tube (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
32	34		Linear LED tube (BaU)	Linear LED tube (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
33	34		Linear LED panel (BaU)	Linear LED panel (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
34	35	Non-building		Bay/shop LED (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
35	35		Bay/shop LED (BaU)	Bay/shop LED (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
36	35	Non-building		Linear LED tube (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
37	35	Non-building		Linear LED panel (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
38	35		Linear LED tube (BaU)	Linear LED tube (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
39	35		Linear LED panel (BaU)	Linear LED panel (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
40	27		Public MV 80W	Public LED equ MV 80W (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
41	27			Public LED equ MV 80W (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
42	27		Public MV 125W	Public LED equ MV 125W (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
43	27		Public LED equ MV 125W (BaU)		0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
44	27		Public HPS 100W	Public LED equ HPS 100W (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
45	27		Public LED equ HPS 100W (BaU)		0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
46	27		Public HPS 150W	Public LED equ HPS 150W (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
47	27		Public LED equ HPS 150W (BaU)		0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
48	27		Public HPS 250W	Public LED equ HPS 250W (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
49	27			Public LED equ HPS 250W (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
50	27		Public HPS 400W	Public LED equ HPS 400W (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995
51	27			Public LED equ HPS 400W (VEU)	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995	0.995

6. GH	G coef	ficient			1.095	1.095		1.095		1.095		1.095		1.095		1.095		1.095		1.095		1.095	
ID	Part	Sector	Baseline	Install	2016b	2017a	2017b	2018a	2018b	2019a	2019b	2020a	2020b	2021a	2021b	2022a	2022b	2023a	2023b	2024a	2024b	2025a	2025b
1	34	Non-Office	Downlight CFL	Downlight LED (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
2	34	Non-Office	Downlight halogen	Downlight LED (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
3	34	Non-Office	Downlight LED (BaU)	Downlight LED (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
4	34	Non-Office	Bay/shop HID	Bay/shop LED (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
5	34	Non-Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
6	34	Non-Office	Linear T5	Linear LED tube (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
7	34	Non-Office	Linear T5	Linear LED panel (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
8	34	Non-Office	Linear T8	Linear LED tube (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
9	34	Non-Office	Linear T8	Linear LED panel (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
10	34	Non-Office	Linear LED tube (BaU)	Linear LED tube (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
11	34	Non-Office	Linear LED panel (BaU)	Linear LED panel (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
12	34	Office	Downlight CFL	Downlight LED (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
13	34	Office	Downlight halogen	Downlight LED (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
14	34		Downlight LED (BaU)	Downlight LED (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
15	34	Office	Bay/shop HID	Bay/shop LED (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
16	34		Bay/shop LED (BaU)	Bay/shop LED (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
17	34	Office Office	Linear T5	Linear LED tube (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
18	34 34	Office	Linear TS	Linear LED panel (VEU)	1.095	1.095 1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
19		Office	Linear T8	Linear LED tube (VEU)	1.095		1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
20 21	34 34	Office	Linear T8 Linear LED tube (BaU)	Linear LED panel (VEU) Linear LED tube (VEU)	1.095 1.095	1.095 1.095	1.095 1.095	1.095 1.095	1.095	1.095 1.095	1.095	1.095	1.095 1.095	1.095 1.095	1.095	1.095 1.095	1.095	1.095 1.095	1.095 1.095	1.095	1.095 1.095	1.095 1.095	1.095
22	34	Office	Linear LED tube (BaU)	Linear LED tube (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
23	34	Industrial	Downlight CFL	Downlight LED (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
24	34	Industrial	Downlight halogen	Downlight LED (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
25	34	Industrial	Downlight LED (BaU)	Downlight LED (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
26	34	Industrial	Bay/shop HID	Bay/shop LED (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
27	34	Industrial	Bay/shop LED (BaU)	Bay/shop LED (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
28	34	Industrial	Linear T5	Linear LED tube (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
29	34	Industrial	Linear T5	Linear LED panel (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
30	34	Industrial	Linear T8	Linear LED tube (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
31	34	Industrial	Linear T8	Linear LED panel (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
32	34	Industrial	Linear LED tube (BaU)	Linear LED tube (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
33	34	Industrial	Linear LED panel (BaU)	Linear LED panel (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
34	35		Bay/shop HID	Bay/shop LED (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
35	35		Bay/shop LED (BaU)	Bay/shop LED (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
36	35	Non-building	Linear T8	Linear LED tube (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
37	35	Non-building	Linear T8	Linear LED panel (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
38	35		Linear LED tube (BaU)	Linear LED tube (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
39	35	Non-building	Linear LED panel (BaU)	Linear LED panel (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
40	27	Public	Public MV 80W	Public LED equ MV 80W (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
41	27	Public	Public LED equ MV 80W (BaU)	Public LED equ MV 80W (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
42	27	Public	Public MV 125W	Public LED equ MV 125W (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
43	27	Public	Public LED equ MV 125W (BaU)	Public LED equ MV 125W (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
44	27	Public	Public HPS 100W	Public LED equ HPS 100W (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
45	27	Public	Public LED equ HPS 100W (BaU)	Public LED equ HPS 100W (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
46	27	Public	Public HPS 150W	Public LED equ HPS 150W (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
47	27	Public	Public LED equ HPS 150W (BaU)	Public LED equ HPS 150W (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
48	27	Public	Public HPS 250W	Public LED equ HPS 250W (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
49	27	Public	Public LED equ HPS 250W (BaU)	Public LED equ HPS 250W (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
50	27	Public	Public HPS 400W	Public LED equ HPS 400W (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095
51	27	Public	Public LED equ HPS 400W (BaU)	Public LED equ HPS 400W (VEU)	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095	1.095

5. Asset lifetime (years)

J. 733	Ct	uille (year	3)																				
ID	Part	Sector	Baseline	Install	2016b	2017a	2017b	2018a	2018b	2019a	2019b	2020a	2020b	2021a	2021b	2022a	2022b	2023a	2023b	2024a	2024b	2025a	2025b
1	34	Non-Office	Downlight CFL	Downlight LED (VEU)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
2	34	Non-Office	Downlight halogen	Downlight LED (VEU)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
3	34	Non-Office	Downlight LED (BaU)	Downlight LED (VEU)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
4	34	Non-Office	Bay/shop HID	Bay/shop LED (VEU)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
5	34	Non-Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
6	34	Non-Office	Linear T5	Linear LED tube (VEU)	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
7	34	Non-Office	Linear T5	Linear LED panel (VEU)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
8	34	Non-Office	Linear T8	Linear LED tube (VEU)	5		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
9	34	Non-Office	Linear T8	Linear LED panel (VEU)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
10	34	Non-Office	Linear LED tube (BaU)	Linear LED tube (VEU)	5	-	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
11	34	Non-Office	Linear LED panel (BaU)	Linear LED panel (VEU)	10		10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
12	34	Office	Downlight CFL	Downlight LED (VEU)	10			10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
13	34	Office	Downlight halogen	Downlight LED (VEU)	10		10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
14	34	Office	Downlight LED (BaU)	Downlight LED (VEU)	10			10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
15	34	Office	Bay/shop HID	Bay/shop LED (VEU)	10			10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
		Office																					
16	34		Bay/shop LED (BaU)	Bay/shop LED (VEU)	10	10	10	10	10	10	10	10 5	10	10	10	10	10	10	10	10	10 5	10	10
17	34	Office	Linear T5	Linear LED tube (VEU)	_	5	5	5	5	_			5	_	_	5	5	_	5	5	_	5	5
18	34	Office	Linear T5	Linear LED panel (VEU)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
19	34	Office	Linear T8	Linear LED tube (VEU)	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
20	34	Office	Linear T8	Linear LED panel (VEU)	10	10		10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
21	34	Office	Linear LED tube (BaU)	Linear LED tube (VEU)	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
22	34	Office	Linear LED panel (BaU)	Linear LED panel (VEU)	10			10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
23	34	Industrial	Downlight CFL	Downlight LED (VEU)	10			10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
24	34	Industrial	Downlight halogen	Downlight LED (VEU)	10			10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
25	34	Industrial	Downlight LED (BaU)	Downlight LED (VEU)	10	-	-	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
26	34	Industrial	Bay/shop HID	Bay/shop LED (VEU)	10			10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
27	34	Industrial	Bay/shop LED (BaU)	Bay/shop LED (VEU)	10		10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
28	34	Industrial	Linear T5	Linear LED tube (VEU)	5	_	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
29	34	Industrial	Linear T5	Linear LED panel (VEU)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
30	34	Industrial	Linear T8	Linear LED tube (VEU)	5	_	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
31	34	Industrial	Linear T8	Linear LED panel (VEU)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
32	34	Industrial	Linear LED tube (BaU)	Linear LED tube (VEU)	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
33	34	Industrial	Linear LED panel (BaU)	Linear LED panel (VEU)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
34	35	Non-building	Bay/shop HID	Bay/shop LED (VEU)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
35	35	Non-building	Bay/shop LED (BaU)	Bay/shop LED (VEU)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
36	35	Non-building	Linear T8	Linear LED tube (VEU)	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
37	35	Non-building	Linear T8	Linear LED panel (VEU)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
38	35	Non-building	Linear LED tube (BaU)	Linear LED tube (VEU)	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
39	35	Non-building	Linear LED panel (BaU)	Linear LED panel (VEU)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
40	27	Public	Public MV 80W	Public LED equ MV 80W (VEU)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
41	27	Public	Public LED equ MV 80W (BaU)	Public LED equ MV 80W (VEU)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
42	27	Public	Public MV 125W	Public LED equ MV 125W (VEU)	10	10		10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
43	27	Public	Public LED equ MV 125W (BaU)	Public LED equ MV 125W (VEU)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
44	27	Public	Public HPS 100W	Public LED equ HPS 100W (VEU)	10		10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
45	27	Public		Public LED equ HPS 100W (VEU)	10			10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
46	27	Public	Public HPS 150W	Public LED equ HPS 150W (VEU)	10			10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
47	27	Public		Public LED equ HPS 150W (VEU)	10		10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
48	27	Public	Public HPS 250W	Public LED equ HPS 250W (VEU)	10	_		10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
49	27	Public		Public LED equ HPS 250W (VEU)	10		10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
50	27	Public	Public HPS 400W	Public LED equ HPS 400W (VEU)	10		10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
51	27	Public		Public LED equ HPS 400W (VEU)	10			10	10	10	10	10	10	10	10	10	10	10	10	10		10	10
31	21	Tublic	T done and equility 400 W (BdU)	T done ZED equ TIF 3 400 W (VEU)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

4. Annual operating hours

2 34 Non-Office Downlight EID (VEU) 5.000	,000 5,00 ,000 5,00 ,000 5,00 ,000 5,00 ,000 5,00 ,000 5,00 ,000 5,00 ,000 5,00 ,000 5,00 ,000 5,00 ,000 3,00	5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 3,000 3,000 3,000 3,000 3,000	2024b 2 5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 3,000 3,000 3,000 3,000	2025a 5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 3,000 3,000 3,000 3,000 3,000 3,000	\$025b\$ \$,000
2 34 Non-Office Downlight LED (VEU) 5,000	,000 5,0 ,000 3,0 ,000 3,0	5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 3,000 3,000 3,000 3,000 3,000	5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 3,000 3,000 3,000 3,000	5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 3,000 3,000 3,000	5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 3,000 3,000 3,000
3 34 Non-Office Bay/Shop LED (Red U) Downlight LED (Red U) 5,000 5	,000 5,0 ,000 5,0 ,000 5,0 ,000 5,0 ,000 5,0 ,000 5,0 ,000 5,0 ,000 5,0 ,000 3,0 ,000 3,0	5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 3,000 3,000 3,000 3,000 3,000 3,000	5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 3,000 3,000 3,000	5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 3,000 3,000 3,000	5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 3,000 3,000
4 34 Non-Office Bay/shop HID Bay/shop LED (NEU) 5,000	,000 5,0 ,000 5,0 ,000 5,0 ,000 5,0 ,000 5,0 ,000 5,0 ,000 5,0 ,000 3,0 ,000 3,0 ,000 3,0 ,000 3,0 ,000 3,0 ,000 3,0 ,000 3,0 ,000 3,0 ,000 3,0	5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 3,000 3,000 3,000 3,000 3,000	5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 3,000 3,000 3,000 3,000	5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 3,000 3,000 3,000	5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 3,000 3,000 3,000
S 34	,000 5,0 ,000 5,0 ,000 5,0 ,000 5,0 ,000 5,0 ,000 5,0 ,000 5,0 ,000 3,0 ,000 3,0	5,000 5,000 5,000 5,000 5,000 5,000 5,000 3,000 3,000 3,000 3,000 3,000	5,000 5,000 5,000 5,000 5,000 5,000 5,000 5,000 3,000 3,000 3,000 3,000	5,000 5,000 5,000 5,000 5,000 5,000 5,000 3,000 3,000 3,000	5,000 5,000 5,000 5,000 5,000 5,000 5,000 3,000 3,000 3,000
6 34 Non-Office Linear TS Linear LED tube (VEU) 5,000	,000 5,00,000 5,00,000 5,00,000 5,00,000 5,00,000 5,00,000 3,000 3,00	5,000 5,000 5,000 5,000 5,000 5,000 3,000 3,000 3,000 3,000 3,000	5,000 5,000 5,000 5,000 5,000 5,000 3,000 3,000 3,000 3,000	5,000 5,000 5,000 5,000 5,000 5,000 3,000 3,000 3,000	5,000 5,000 5,000 5,000 5,000 5,000 3,000 3,000 3,000
7 34 Non-Office Linear TS Linear ED panel (VEL) 5,000	,000 5,00,000 5,00,000 5,00,000 5,00,000 3,000,000	5,000 5,000 5,000 5,000 5,000 3,000 3,000 3,000 3,000 3,000 3,000	5,000 5,000 5,000 5,000 5,000 3,000 3,000 3,000 3,000	5,000 5,000 5,000 5,000 5,000 3,000 3,000 3,000	5,000 5,000 5,000 5,000 5,000 3,000 3,000 3,000
8 34 Non-Office Linear TB Linear LED tube (VEU) 5,000	,000 5,00,000 5,00,000 5,00,000 5,00,000 3,00,000 3,00,000 3,000 3,000,000	5,000 5,000 5,000 5,000 3,000 3,000 3,000 3,000 3,000 3,000	5,000 5,000 5,000 5,000 3,000 3,000 3,000 3,000	5,000 5,000 5,000 5,000 3,000 3,000 3,000	5,000 5,000 5,000 5,000 3,000 3,000 3,000
9 34 Non-Office Linear IEB Linear LED panel (VEU) 5,000 5,00	,000 5,00 ,000 5,00 ,000 5,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00	5,000 5,000 5,000 3,000 3,000 3,000 3,000 3,000 3,000	5,000 5,000 5,000 3,000 3,000 3,000 3,000	5,000 5,000 5,000 3,000 3,000 3,000	5,000 5,000 5,000 3,000 3,000 3,000
10 34 Non-Office Linear LED tube (BaU) Linear LED tube (VEU) 5,000	,000 5,00 ,000 5,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00	5,000 5,000 3,000 3,000 3,000 3,000 3,000 3,000	5,000 5,000 3,000 3,000 3,000 3,000	5,000 5,000 3,000 3,000 3,000	5,000 5,000 3,000 3,000 3,000
11 34 Non-Office Linear LED panel (BaU) Linear LED panel (VEU) 5,000 5,0	,000 5,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00	5,000 3,000 3,000 3,000 3,000 3,000	5,000 3,000 3,000 3,000 3,000	5,000 3,000 3,000 3,000	5,000 3,000 3,000 3,000
12 34 Office Downlight LED (VEU) 3,000 3,0	,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00	3,000 3,000 3,000 3,000 3,000	3,000 3,000 3,000 3,000	3,000 3,000 3,000	3,000 3,000 3,000
13 34 Office Downlight LED (VEU) 3,000 3,0	,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00	3,000 3,000 3,000 3,000	3,000 3,000 3,000	3,000 3,000	3,000 3,000
14 34 Office Downlight LED (BaU) Downlight LED (VEU) 3,000 3	,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00	3,000 3,000 3,000	3,000 3,000	3,000	3,000
15 34 Office Bay/shop LED (VEU) 3,000 3,00	,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00	3,000 3,000	3,000		
16 34 Office Linear T5 Linear LED tube (VEU) 3,000 3,0	,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00	3,000		3,000	
17 34 Office Linear T5 Linear LED tube (VEU) 3,000 3,0	,000 3,00 ,000 3,00 ,000 3,00 ,000 3,00		3.000		3,000
18 34 Office Linear T5 Linear LED panel (VEU) 3,000 3,	,000 3,0 ,000 3,0 ,000 3,0	3,000		3,000	3,000
19 34 Office Linear T8 Linear LED tube (VEU) 3,000 3,0	,000 3,0 ,000 3,0		3,000	3,000	3,000
20 34 Office Linear LED tube (BaU) Linear LED panel (VEU) 3,000 3,	,000 3,0		3,000	3,000	3,000
21 34 Office Linear LED tube (BaU) Linear LED tube (VEU) 3,000 3,0		-	3,000	3,000	3,000
22 34 Office Linear LED panel (BaU) Linear LED panel (VEU) 3,000 3			3,000	3,000	3,000
23 34 Industrial Downlight CFL Downlight LED (VEU) 5,000 5,0			3,000	3,000	3,000
24 34 Industrial Downlight LED (VEU) 5,000 <td></td> <td></td> <td>3,000</td> <td>3,000</td> <td>3,000</td>			3,000	3,000	3,000
25 34 Industrial Downlight LED (BaU) Downlight LED (VEU) 5,000 5,0		-,	5,000	5,000	5,000
26 34 Industrial Bay/shop HID Bay/shop LED (VEU) 5,000			5,000	5,000	5,000
27 34 Industrial Bay/shop LED (BaU) Bay/shop LED (VEU) 5,000 <	,	-,	5,000	5,000	5,000
28 34 Industrial Linear T5 Linear LED tube (VEU) 5,000			5,000	5,000	5,000
			5,000	5,000	5,000
29 34 Industrial Linear T5 Linear I ED panel (VEU) 5.000 5.0			5,000	5,000	5,000
			5,000	5,000	5,000
			5,000	5,000	5,000
			5,000	5,000	5,000
			5,000	5,000	5,000
			5,000	5,000	5,000
			4,500	4,500	4,500
			4,500	4,500	4,500
			4,500	4,500	4,500
			4,500	4,500	4,500
			4,500	4,500	4,500
			4,500	4,500	4,500
			4,500	4,500 4.500	4,500 4,500
	,		4,500		
			4,500	4,500	4,500
			4,500	4,500	4,500
			4,500	4,500	4,500
			4,500	4,500	4,500
			4,500	4,500	4,500
			4,500	4,500	4,500
			4,500	4,500	4,500
	.500 4.5		4,500	4,500	4,500
		,	4,500 4.500	4,500 4.500	4,500
51 27 Public Public LED equ HPS 400W (BaU) Public LED equ HPS 400W (VEU) 4,500	,500 4,5	4.500			4,500

3. Power saving per fixture

		0111																					
ID	Part	Sector	Baseline	Install	2016b	2017a	2017b	2018a	2018b		2019b		2020b	2021a	2021b			2023a		2024a	2024b	2025a	2025b
1	34	Non-Office	Downlight CFL	Downlight LED (VEU)	20	20	20	20	20	20	21	21	21	21	21	21	21	22	22	22	22	22	22
2	34	Non-Office	Downlight halogen	Downlight LED (VEU)	20	20	20	20	20	20	21	21	21	21	21	21	21	22	22	22	22	22	22
3	34	Non-Office	Downlight LED (BaU)	Downlight LED (VEU)	5	5	5	5	5	5	6	6	6	6	6	6	6	7	7	7	7	7	7
4	34	Non-Office	Bay/shop HID	Bay/shop LED (VEU)	153	154	155	156	156	157	158	159	159	160	161	161	162	163	163	164	165	165	166
5	34	Non-Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)	50	51	52	52	53	54	55	55	56	57	57	58	59	59	60	61	61	62	63
6	34	Non-Office	Linear T5	Linear LED tube (VEU)	59	60	60	60	61	61	62	62	62	63	63	64	64	64	65	65	65	66	66
7	34	Non-Office	Linear T5	Linear LED panel (VEU)	59	60	60	60	61	61	62	62	62	63	63	64	64	64	65	65	65	66	66
8	34	Non-Office	Linear T8	Linear LED tube (VEU)	65	66	66	66	67	67	68	68	68	69	69	70	70	70	71	71	71	72	72
9	34	Non-Office	Linear T8	Linear LED panel (VEU)	65	66	66	66	67	67	68	68	68	69	69	70	70	70	71	71	71	72	72
10	34	Non-Office	Linear LED tube (BaU)	Linear LED tube (VEU)	18	19	19	19	20	20	21	21	21	22	22	23	23	23	24	24	24	25	25
11	34	Non-Office	Linear LED panel (BaU)	Linear LED panel (VEU)	18	19	19	19	20	20	21	21	21	22	22	23	23	23	24	24	24	25	25
12	34	Office	Downlight CFL	Downlight LED (VEU)	20	20	20	20	20	20	21	21	21	21	21	21	21	22	22	22	22	22	22
13	34	Office	Downlight halogen	Downlight LED (VEU)	20	20	20	20	20	20	21	21	21	21	21	21	21	22	22	22	22	22	22
14	34	Office	Downlight LED (BaU)	Downlight LED (VEU)	5	5	5	5	5	5	6	6	6	6	6	6	6	7	7	7	7	7	7
15	34	Office	Bay/shop HID	Bay/shop LED (VEU)	102	103	103	104	104	105	105	106	106	107	107	108	108	108	109	109	110	110	111
16	34	Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)	33	34	34	35	35	36	36	37	37	38	38	39	39	40	40	40	41	41	42
17	34	Office	Linear T5	Linear LED tube (VEU)	59	60	60	60	61	61	62	62	62	63	63	64	64	64	65	65	65	66	66
18	34	Office	Linear T5	Linear LED panel (VEU)	59	60	60	60	61	61	62	62	62	63	63	64	64	64	65	65	65	66	66
19	34	Office	Linear T8	Linear LED tube (VEU)	65	66	66	66	67	67	68	68	68	69	69	70	70	70	71	71	71	72	72
20	34	Office	Linear T8	Linear LED panel (VEU)	65	66	66	66	67	67	68	68	68	69	69	70	70	70	71	71	71	72	72
21	34	Office	Linear LED tube (BaU)	Linear LED tube (VEU)	18	19	19	19	20	20	21	21	21	22	22	23	23	23	24	24	24	25	25
22	34	Office	Linear LED panel (BaU)	Linear LED panel (VEU)	18	19	19	19	20	20	21	21	21	22	22	23	23	23	24	24	24	25	25
23	34	Industrial	Downlight CFL	Downlight LED (VEU)	20	20	20	20	20	20	21	21	21	21	21	21	21	22	22	22	22	22	22
24	34	Industrial	Downlight halogen	Downlight LED (VEU)	20	20	20	20	20	20	21	21	21	21	21	21	21	22	22	22	22	22	22
25	34	Industrial	Downlight LED (BaU)	Downlight LED (VEU)	5	20	5	5	5	5	6	6	6	6	6		6	7	7	7	7	7	7
26	34	Industrial	Bay/shop HID	Bay/shop LED (VEU)	307	308	310	311	313	314	316	317	319	320	321	323	324	325	327	328	329	330	332
27	34	Industrial	Bay/shop LED (BaU)	Bay/shop LED (VEU)	100	102	103	105	106	108	109	111	112	113	115	116	118	119	120	121	123	124	125
28	34	Industrial	Linear T5	Linear LED tube (VEU)	59	60	60	60	61	61	62	62	62	63	63	64	64	64	65	65	65	66	66
29	34	Industrial	Linear T5	Linear LED tube (VEU)	59	60	60	60	61	61	62	62	62	63	63	64	64	64	65	65	65	66	66
30	34	Industrial	Linear T8	Linear LED tube (VEU)	65	66	66	66	67	67	68	68	68	69	69	70	70	70	71	71	71	72	72
31	34	Industrial	Linear T8	Linear LED panel (VEU)	65	66	66	66	67	67	68	68	68	69	69	70	70	70	71	71	71	72	72
32	34	Industrial	Linear LED tube (BaU)	Linear LED tube (VEU)	18	19	19	19	20	20	21	21	21	22	22	23	23	23	24	24	24	25	25
33	34	Industrial	Linear LED panel (BaU)	Linear LED panel (VEU)	18	19	19	19	20	20	21	21	21	22	22	23	23	23	24	24	24	25	25
34	35	Non-building		Bay/shop LED (VEU)	307	308	310	311	313	314	316	317	319	320	321	323	324	325	327	328	329	330	332
35	35		Bay/shop LED (BaU)	Bay/shop LED (VEU)	100	102	103	105	106	108	109	111	112	113	115	116	118	119	120	121	123	124	125
36	35	Non-building		Linear LED tube (VEU)	65	66	66	66	67	67	68	68	68	69	69	70	70	70	71	71	71	72	72
37	35	Non-building		Linear LED panel (VEU)	65	66	66	66	67	67	68	68	68	69	69	70	70	70	71	71	71	72	72
38	35		Linear LED tube (BaU)	Linear LED tube (VEU)	18	19	19	19	20	20	21	21	21	22	22	23	23	23	24	24	24	25	25
39	35		Linear LED panel (BaU)	Linear LED panel (VEU)	18	19	19	19	20	20	21	21	21	22	22	23	23	23	24	24	24	25	25
40	27	Public	Public MV 80W	Public LED equ MV 80W (VEU)	75	76	76	76	77	77	77	77	78	78	78	79	79	79	79	80	80	80	80
41	27	Public	Public LED equ MV 80W (BaU)	Public LED equ MV 80W (VEU)	27	28	28	28	29	29	29	29	30	30	30	31	31	31	31	32	32	32	32
42	27	Public	Public MV 125W	Public LED equ MV 125W (VEU)	88	88	89	89	90	90	91	91	91	92	92	93	93	93	94	94	95	95	95
43	27	Public	Public LED equ MV 125W (BaU)		28	28	29	29	30	30	31	31	31	32	32	33	33	33	34	34	35	35	35
44	27	Public	Public HPS 100W	Public LED equ HPS 100W (VEU)	116	117	117	117	118	118	118	119	119	119	120	120	120	121	121	121	122	122	122
45	27	Public		Public LED equ HPS 100W (VEU)	45	46	46	46	47	47	47	48	48	48	49	49	49	50	50	50	51	51	51
46	27	Public	Public HPS 150W	Public LED equ HPS 150W (VEU)	132	133	134	134	135	135	136	136	137	137	138	138	139	139	140	140	141	141	141
47	27	Public		Public LED equ HPS 150W (VEU)	47	47	48	49	49	50	50	51	51	52	52	53	53	54	54	55	55	56	56
48	27	Public	Public HPS 250W	Public LED equ HPS 250W (VEU)	212	213	214	214	215	216	217	218	219	220	221	221	222	223	224	224	225	226	227
49	27	Public	Public LED equ HPS 250W (BaU)	Public LED equ HPS 250W (VEU)	74	75	76	76	77	78	79	80	81	82	83	83	84	85	86	86	87	88	89
50	27	Public	Public HPS 400W	Public LED equ HPS 400W (VEU)	337	339	340	341	343	344	346	347	349	350	351	353	354	355	356	358	359	360	361
51	27	Public	Public LED equ HPS 400W (BaU)	Public LED equ HPS 400W (VEU)	117	119	120	121	123	124	126	127	129	130	131	133	134	135	136	138	139	140	141

2. Up	grade	power pei	fixture (LCP x CM x	AM)	Increase in I	.ED efficacy p	er 6 months	1.5%															
ID	Part	Sector	Baseline	Install	2016b	2017a	2017b	2018a	2018b	2019a	2019b	2020a	2020b	2021a	2021b	2022a	2022b	2023a	2023b	2024a	2024b	2025a	2025b
1	34	Non-Office	Downlight CFL	Downlight LED (VEU)	10.3	10.2	10.0	9.9	9.7	9.6	9.4	9.3	9.1	9.0	8.9	8.7	8.6	8.5	8.4	8.2	8.1	8.0	7.9
2	34	Non-Office	Downlight halogen	Downlight LED (VEU)	10.3	10.2	10.0	9.9	9.7	9.6	9.4	9.3	9.1	9.0	8.9	8.7	8.6	8.5	8.4	8.2	8.1	8.0	7.9
3	34	Non-Office	Downlight LED (BaU)	Downlight LED (VEU)	10.3	10.2	10.0	9.9	9.7	9.6	9.4	9.3	9.1	9.0	8.9	8.7	8.6	8.5	8.4	8.2	8.1	8.0	7.9
4	34	Non-Office	Bay/shop HID	Bay/shop LED (VEU)	53.2	52.4	51.6	50.9	50.1	49.4	48.6	47.9	47.2	46.5	45.8	45.2	44.5	43.8	43.2	42.5	41.9	41.3	40.7
5	34	Non-Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)	53.2	52.4	51.6	50.9	50.1	49.4	48.6	47.9	47.2	46.5	45.8	45.2	44.5	43.8	43.2	42.5	41.9	41.3	40.7
6	34	Non-Office	Linear T5	Linear LED tube (VEU)	28.8	28.4	28.0	27.6	27.2	26.8	26.4	26.0	25.6	25.2	24.9	24.5	24.1	23.8	23.4	23.1	22.7	22.4	22.1
7	34	Non-Office	Linear T5	Linear LED panel (VEU)	28.8	28.4	28.0	27.6	27.2	26.8	26.4	26.0	25.6		24.9	24.5	24.1		23.4	23.1	22.7	22.4	22.1
8	34	Non-Office	Linear T8	Linear LED tube (VEU)	28.8	28.4	28.0	27.6	27.2	26.8	26.4	26.0	25.6	25.2	24.9	24.5	24.1		23.4	23.1	22.7	22.4	22.1
9	34	Non-Office	Linear T8	Linear LED panel (VEU)	28.8	28.4	28.0	27.6	27.2	26.8	26.4	26.0	25.6		24.9	24.5	24.1		23.4	23.1	22.7	22.4	22.1
10	34	Non-Office	Linear LED tube (BaU)	Linear LED tube (VEU)	28.8	28.4	28.0	27.6	27.2	26.8	26.4	26.0	25.6		24.9	24.5	24.1		23.4	23.1	22.7	22.4	22.1
11	34	Non-Office	Linear LED panel (BaU)	Linear LED panel (VEU)	28.8	28.4	28.0	27.6	27.2	26.8	26.4	26.0	25.6		24.9	24.5	24.1		23.4	23.1	22.7	22.4	22.1
12	34	Office	Downlight CFL	Downlight LED (VEU)	10.3	10.2	10.0	9.9	9.7	9.6	9.4	9.3	9.1		8.9	8.7	8.6		8.4	8.2	8.1	8.0	7.9
13	34	Office	Downlight halogen	Downlight LED (VEU)	10.3	10.2	10.0	9.9	9.7	9.6	9.4	9.3	9.1		8.9	8.7	8.6		8.4	8.2	8.1	8.0	7.9
14	34	Office	Downlight LED (BaU)	Downlight LED (VEU)	10.3	10.2	10.0	9.9	9.7	9.6	9.4	9.3	9.1	9.0	8.9	8.7	8.6		8.4	8.2	8.1	8.0	7.9
15	34	Office	Bay/shop HID	Bay/shop LED (VEU)	35.5	34.9	34.4	33.9	33.4	32.9	32.4	31.9	31.5		30.6	30.1	29.7		28.8	28.4	27.9	27.5	27.1
16	34	Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)	35.5	34.9	34.4	33.9	33.4	32.9	32.4	31.9	31.5	31.0	30.6	30.1	29.7	29.2	28.8	28.4	27.9	27.5	27.1
17	34	Office	Linear T5	Linear LED tube (VEU)	28.8	28.4	28.0	27.6	27.2	26.8	26.4	26.0	25.6		24.9	24.5	24.1		23.4	23.1	22.7	22.4	22.1
18	34	Office	Linear T5	Linear LED tube (VEU)	28.8	28.4	28.0	27.6	27.2	26.8	26.4	26.0	25.6		24.9	24.5	24.1		23.4	23.1	22.7	22.4	22.1
19	34	Office	Linear T8	Linear LED tube (VEU)	28.8	28.4	28.0	27.6	27.2	26.8	26.4	26.0	25.6		24.9	24.5	24.1		23.4	23.1	22.7	22.4	22.1
20	34	Office	Linear T8	Linear LED tube (VEU)	28.8	28.4	28.0	27.6	27.2	26.8	26.4	26.0	25.6	25.2	24.9	24.5	24.1		23.4	23.1	22.7	22.4	22.1
21	34	Office	Linear LED tube (BaU)	Linear LED tube (VEU)	28.8	28.4	28.0	27.6	27.2	26.8	26.4	26.0	25.6		24.9	24.5	24.1		23.4	23.1	22.7	22.4	22.1
22	34	Office	Linear LED tube (BaU)	Linear LED tube (VEU)	28.8	28.4	28.0	27.6	27.2	26.8	26.4	26.0	25.6		24.9	24.5	24.1		23.4	23.1	22.7	22.4	22.1
23	34	Industrial	Downlight CFL	Downlight LED (VEU)	10.3	10.2	10.0	9.9	9.7	9.6	9.4	9.3	9.1		8.9	8.7	8.6		8.4	8.2	8.1	8.0	7.9
24	34	Industrial	Downlight halogen	Downlight LED (VEU)	10.3	10.2	10.0	9.9	9.7	9.6	9.4	9.3	9.1	9.0	8.9	8.7	8.6		8.4	8.2	8.1	8.0	7.9
25	34	Industrial	Downlight LED (BaU)	Downlight LED (VEU)	10.3	10.2	10.0	9.9	9.7	9.6	9.4	9.3	9.1		8.9	8.7	8.6		8.4	8.2	8.1	8.0	7.9
26	34		. 0 . (,			10.2	103.3	101.7	100.2	98.7	97.3	95.8	94.4	93.0	91.7		89.0		86.4	85.1	83.8	82.6	
25	34	Industrial	Bay/shop HID	Bay/shop LED (VEU)	106.4				100.2			95.8				90.3	89.0			85.1			81.4 81.4
28	34	Industrial	Bay/shop LED (BaU)	Bay/shop LED (VEU)	106.4 28.8	104.8 28.4	103.3 28.0	101.7 27.6	27.2	98.7 26.8	97.3 26.4	26.0	94.4 25.6		91.7 24.9	90.3 24.5		_	86.4 23.4	23.1	83.8 22.7	82.6 22.4	22.1
28	34	Industrial Industrial	Linear T5 Linear T5	Linear LED tube (VEU) Linear LED panel (VEU)	28.8	28.4	28.0	27.6	27.2	26.8	26.4	26.0	25.6		24.9	24.5	24.1 24.1		23.4	23.1	22.7	22.4	22.1
																							22.1
30 31	34 34	Industrial Industrial	Linear T8 Linear T8	Linear LED tube (VEU)	28.8 28.8	28.4 28.4	28.0 28.0	27.6 27.6	27.2 27.2	26.8 26.8	26.4 26.4	26.0 26.0	25.6 25.6		24.9 24.9	24.5 24.5	24.1 24.1		23.4 23.4	23.1 23.1	22.7 22.7	22.4 22.4	22.1
-	34	Industrial	Linear 18 Linear LED tube (BaU)	Linear LED panel (VEU)	28.8	28.4	28.0	27.6	27.2	26.8	26.4	26.0	25.6		24.9	24.5	24.1		23.4	23.1	22.7	22.4	22.1
32 33	34	Industrial	Linear LED tube (BaU)	Linear LED tube (VEU)	28.8	28.4	28.0	27.6	27.2	26.8	26.4	26.0	25.6		24.9	24.5	24.1		23.4	23.1	22.7	22.4	22.1
	-			Linear LED panel (VEU)																			
34 35	35	Non-building	Bay/shop HID	Bay/shop LED (VEU)	106.4	104.8 104.8	103.3 103.3	101.7	100.2 100.2	98.7 98.7	97.3 97.3	95.8 95.8	94.4 94.4	93.0 93.0	91.7 91.7	90.3	89.0 89.0		86.4	85.1	83.8 83.8	82.6 82.6	81.4 81.4
	35		Bay/shop LED (BaU)	Bay/shop LED (VEU)	106.4			101.7								90.3			86.4	85.1			
36	35	Non-building Non-building		Linear LED tube (VEU)	28.8	28.4	28.0	27.6	27.2	26.8	26.4	26.0	25.6		24.9	24.5	24.1		23.4	23.1	22.7	22.4	22.1
37	35			Linear LED panel (VEU)	28.8	28.4 28.4	28.0 28.0	27.6	27.2 27.2	26.8 26.8	26.4	26.0	25.6 25.6		24.9	24.5 24.5	24.1 24.1		23.4	23.1 23.1	22.7	22.4	22.1
38	35	Non-building	Linear LED tube (BaU) Linear LED panel (BaU)	Linear LED tube (VEU)	28.8			27.6			26.4	26.0			24.9				23.4		22.7	22.4	
39	35			Linear LED panel (VEU)	28.8	28.4	28.0	27.6	27.2	26.8	26.4	26.0	25.6		24.9	24.5	24.1		23.4	23.1	22.7	22.4	22.1
40	27	Public	Public MV 80W	Public LED equ MV 80W (VEU)	20.6	20.3	20.0	19.7	19.4	19.1	18.8	18.6	18.3	18.0	17.8	17.5	17.2		16.7	16.5	16.2	16.0	15.8
41	27	Public	Public LED equ MV 80W (BaU)	Public LED equ MV 80W (VEU)	20.6	20.3	20.0	19.7	19.4	19.1	18.8	18.6	18.3		17.8	17.5	17.2		16.7	16.5	16.2	16.0	15.8
42	27	Public	Public MV 125W	Public LED equ MV 125W (VEU)	32.2	31.7	31.3	30.8	30.3	29.9	29.4	29.0	28.6		27.7	27.3	26.9		26.1	25.8	25.4	25.0	24.6
43	27	Public		Public LED equ MV 125W (VEU)	32.2	31.7	31.3	30.8	30.3	29.9	29.4	29.0	28.6		27.7	27.3	26.9		26.1	25.8	25.4	25.0	24.6
44	27	Public	Public HPS 100W	Public LED equ HPS 100W (VEU)	25.8	25.4	25.0	24.6	24.3	23.9	23.6	23.2	22.9	22.5	22.2	21.9	21.5		20.9	20.6	20.3	20.0	19.7
45	27	Public		Public LED equ HPS 100W (VEU)	25.8	25.4	25.0	24.6	24.3	23.9	23.6	23.2	22.9		22.2	21.9	21.5		20.9	20.6	20.3	20.0	19.7
46	27	Public	Public HPS 150W	Public LED equ HPS 150W (VEU)	38.6	38.1	37.5	36.9	36.4	35.9	35.3	34.8	34.3	33.8	33.3	32.8	32.3		31.4	30.9	30.4	30.0	29.6
47	27	Public		Public LED equ HPS 150W (VEU)	38.6	38.1	37.5	36.9	36.4	35.9	35.3	34.8	34.3	33.8	33.3	32.8	32.3		31.4	30.9	30.4	30.0	29.6
48	27	Public	Public HPS 250W	Public LED equ HPS 250W (VEU)	64.4	63.4	62.5	61.6	60.7	59.8	58.9	58.0	57.2	56.3	55.5	54.7	53.9	53.1	52.3	51.5	50.7	50.0	49.3

58.0

92.8

94.2 92.8

57.2

91.5

58.9

94.2

56.3

91.5 90.1 88.8 87.5

90.1

55.5 54.7

87.5

88.8

53.9

86.2

86.2

53.1

84.9

84.9

52.3 51.5

82.4

83.6

83.6

50.7

81.2

82.4 81.2 80.0

50.0

80.0

49.3

78.8

78.8

63.4 62.5

100.0

101.5

103.0 101.5 100.0

103.0

61.6

98.5

60.7

98.5 97.1 95.6

97.1

59.8

95.6

49 27 Public

50 27 Public

51 27 Public

Public LED equ HPS 250W (BaU) Public LED equ HPS 250W (VEU) 64.4

Public HPS 400W Public LED equ HPS 400W (VEU)
Public LED equ HPS 400W (BaU) Public LED equ HPS 400W (VEU)

1. Baseline power per fixture (LCP x CM x AM)

Du		pone. pe.	TIACUTE (LCT A CIVI A	,																			
ID	Part	Sector	Baseline	Install	2016b	2017a	2017b	2018a	2018b	2019a	2019b	2020a	2020b	2021a	2021b	2022a	2022b	2023a	2023b	2024a	2024b	2025a	2025b
1	34	Non-Office	Downlight CFL	Downlight LED (VEU)	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
2	34	Non-Office	Downlight halogen	Downlight LED (VEU)	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
3	34	Non-Office	Downlight LED (BaU)	Downlight LED (VEU)	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
4	34	Non-Office	Bay/shop HID	Bay/shop LED (VEU)	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207
5	34	Non-Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103
6	34	Non-Office	Linear T5	Linear LED tube (VEU)	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
7	34	Non-Office	Linear T5	Linear LED panel (VEU)	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
8	34	Non-Office	Linear T8	Linear LED tube (VEU)	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94
9	34	Non-Office	Linear T8	Linear LED panel (VEU)	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94
10	34	Non-Office	Linear LED tube (BaU)	Linear LED tube (VEU)	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
11	34	Non-Office	Linear LED panel (BaU)	Linear LED panel (VEU)	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
12	34	Office	Downlight CFL	Downlight LED (VEU)	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
13	34	Office	Downlight halogen	Downlight LED (VEU)	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
14	34	Office	Downlight LED (BaU)	Downlight LED (VEU)	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
15	34	Office	Bay/shop HID	Bay/shop LED (VEU)	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138
16	34	Office	Bay/shop LED (BaU)	Bay/shop LED (VEU)	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69
17	34	Office	Linear T5	Linear LED tube (VEU)	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
18	34	Office	Linear T5	Linear LED panel (VEU)	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
19	34	Office	Linear T8	Linear LED tube (VEU)	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94
20	34	Office	Linear T8	Linear LED panel (VEU)	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94
21	34	Office	Linear LED tube (BaU)	Linear LED tube (VEU)	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
22	34	Office	Linear LED panel (BaU)	Linear LED panel (VEU)	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
23	34	Industrial	Downlight CFL	Downlight LED (VEU)	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
24	34	Industrial	Downlight halogen	Downlight LED (VEU)	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
25	34	Industrial	Downlight LED (BaU)	Downlight LED (VEU)	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
26	34	Industrial	Bay/shop HID	Bay/shop LED (VEU)	413	413	413	413	413	413	413	413	413	413	413	413	413	413	413	413	413	413	413
27	34	Industrial	Bay/shop LED (BaU)	Bay/shop LED (VEU)	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207
28	34	Industrial	Linear T5	Linear LED tube (VEU)	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
29	34	Industrial	Linear T5	Linear LED panel (VEU)	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
30	34	Industrial	Linear T8	Linear LED tube (VEU)	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94
31	34	Industrial	Linear T8	Linear LED panel (VEU)	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94
32	34	Industrial	Linear LED tube (BaU)	Linear LED tube (VEU)	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
33	34	Industrial	Linear LED panel (BaU)	Linear LED panel (VEU)	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
34	35	Non-building	Bay/shop HID	Bay/shop LED (VEU)	413	413	413	413	413	413	413	413	413	413	413	413	413	413	413	413	413	413	413
35	35	Non-building	Bay/shop LED (BaU)	Bay/shop LED (VEU)	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207
36	35	Non-building	Linear T8	Linear LED tube (VEU)	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94
37	35	Non-building	Linear T8	Linear LED panel (VEU)	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94
38	35	Non-building	Linear LED tube (BaU)	Linear LED tube (VEU)	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
39	35	Non-building	Linear LED panel (BaU)	Linear LED panel (VEU)	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
40	27	Public	Public MV 80W	Public LED equ MV 80W (VEU)	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96
41	27	Public	Public LED equ MV 80W (BaU)	Public LED equ MV 80W (VEU)	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
42	27	Public	Public MV 125W	Public LED equ MV 125W (VEU)	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120
43	27	Public	Public LED equ MV 125W (BaU)	Public LED equ MV 125W (VEU)	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
44	27	Public	Public HPS 100W	Public LED equ HPS 100W (VEU)	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142
45	27	Public	Public LED equ HPS 100W (BaU)	Public LED equ HPS 100W (VEU)	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71
46	27	Public	Public HPS 150W	Public LED equ HPS 150W (VEU)	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171
47	27	Public	Public LED equ HPS 150W (BaU)	Public LED equ HPS 150W (VEU)	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86
48	27	Public	Public HPS 250W	Public LED equ HPS 250W (VEU)	276	276	276	276	276	276	276	276	276	276	276	276	276	276	276	276	276	276	276
49	27	Public	Public LED equ HPS 250W (BaU)	Public LED equ HPS 250W (VEU)	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138
50	27	Public	Public HPS 400W	Public LED equ HPS 400W (VEU)	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440
51	27	Public	Public LED equ HPS 400W (BaU)	Public LED equ HPS 400W (VEU)	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220
			.,(200)	.,																			